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STATE OF UTAH
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT
4110 State Office Building / SLC, Utah 84114 / (801) 538-3018

DFCM PROJECT NO. 05232470

VAN BOERUM & FRANK ASSOCIATES INC.
CONSULTING ENGINEERS
330 SOUTH 300 EAST - SALT LAKE CITY, UTAH 84111 - 801.530.3148 - www.vbfa.com

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ABBREVIATIONS

ABOVE FINISHED FLOOR	AFF
ALTERNATE	ALT.
ALUMINUM	AL.
AMERICAN CONCRETE INSTITUTE	ACI
AMERICAN NATIONAL STANDARDS INSTITUTE	ANSI
AMERICAN SOCIETY OF TESTING & MATERIALS	ASTM
AMERICAN WELDING SOCIETY	AWS
ANCHOR BOLT	A.B.
AND	&
ANGLE	L
APPROVED	APPD.
APPROXIMATE	APPROX.
ARCHITECT OR ARCHITECTURAL	ARCH.
ARCHITECTURAL CONCRETE	AC
AVERAGE	AVG.
AT	@
BEAM	BM
BLOCKING	BLKG.
BOTTOM	BOT.
BRACKET	BRKT.
BUILDING	BLDG.
CALCIUM SILICATE MASONRY UNIT	CSMU
CATCH BASIN	C.B.
CENTER	CTR.
CENTERLINE	CL
CENTER TO CENTER	C TO C
CHANNEL	[
CLEANOUT	C.O.
COLUMN	COL.
COMPOSITION	COMP.
CONCRETE MASONRY UNIT	C.M.U.
CONCRETE REINFORCING STEEL INSTITUTE	CRSI
CONSTRUCTION	CONST.
CONTINUOUS	CONT.
COUNTERSINK	CSK.
CUBIC	CU.
CUBIC FOOT	CU. FT.
CUBIC FEET PER MINUTE	CFM
CUBIC INCH	CU. IN.
CUBIC YARD	CU. YD.
DEPARTMENT	DEPT.
DIAGONAL	DIAG.
DIAMETER	ø
DIMENSION	DIM.
DOOR	DR
DOUBLE	DBL.
DRAWING	DWG.
ELECTRICAL	ELEC.
ELECTRIC WATER COOLER	EWC
ELEVATION	EL.
EQUIPMENT	EQUIP.
EXPANSION JOINT	EJ / EXP. JT.
EXTERIOR INSULATION FINISH SYSTEM	EIFS
FAR SIDE	F.S.
FEET OR FOOT	FT. or '
FIELD VERIFY	F.V.
FINISH FLOOR	F.F.
FIRE EXTINGUISHER CABINET	F.E.C.
FIRE HOSE CABINET	F.H.C.
FIRE HYDRANT	F.H.
FIRE RETARDANT TREATED	FRT
FLOOR DRAIN	FD
FLUORESCENT	FLUOR.
FOOTING	FTG.
FOUNDATION	FND.
GALVANIZED	GALV.
GAGE OR GAUGE	GA.
GLAZED STRUCTURAL UNIT	GSU
GYPSUM BOARD	GYP. BD.
HARDWARE	HDW.
HEIGHT	HGT.
HIGH STRENGTH BOLT	HSB
HORIZONTAL	HORIZ.
INCH	"
INFORMATION	INFO.
INSIDE DIAMETER	I.D.
INTERMEDIATE	INTER.
KIP (1,000 LB.)	K
LABORATORY	LAB.
MANUFACTURER	MFG.
MAXIMUM	MAX.
MECHANICAL	MECH.
MINIMUM	MIN.
MISCELLANEOUS	MISC.
NATIONAL BOARD OF FIRE UNDERWRITERS	NBFU
NATIONAL ELECTRICAL CODE	NEC
NATIONAL ELECTRICAL MANUFACTURERS ASSOC.	NEMA
NEAR SIDE	N.S.
NOT IN CONTRACT	N.I.C.
NOT TO SCALE	NTS
NUMBER	NO. or #
ON CENTER	O.C.
OPENING	OPNG.
OPPOSITE	OPP.
OUTSIDE DIAMETER	O.D.
PENNY	d
PER	/
PERPENDICULAR	PERP.
PHASE	ø
POUND	LB. or #
PREFABRICATED	PREFAB.
PROPERTY LINE	P/L
RADIUS	R
REINFORCING	REINF.
REQUIRED	REQ'D.
REVISION	REV.
ROD & SHELF	R&S
ROOF DRAIN	RD
ROOM	RM
ROUND	RD. or ø
SHEET	SHT.
SIMILAR	SIM.
SOUND ATTENUATION BLANKET	SAB
SPECIFICATION	SPEC.
SQUARE	SQ. or
SYMMETRICAL	SYM.
SYNTHETIC STUCCO EXTERIOR INSULATION SYSTEM	SSEIS
TOP OF MASONRY	T.O.M.
TOP BACK OF CURB	T.B.C.
TOP OF LANDSCAPING	T.L.
TOP OF WALK	T.W.
TOP OF STEEL	TOS
TOP OF WALL	TOW
TYPICAL	TYP.
UNLESS NOTED OTHERWISE	U.N.O.
VERTICAL	VERT.
VINYL WALL COVERING	VWC.
WELDED WIRE FABRIC	WWF
WITH	W/
WITHOUT	W/O

MATERIAL DESIGNATIONS

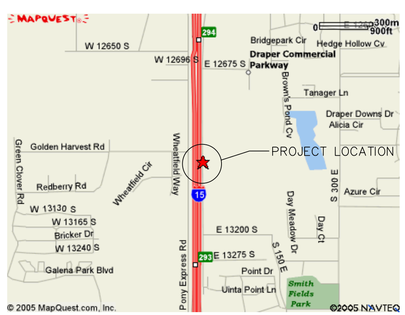
- EARTH
- POROUS FILL
- ASPHALT
- CONCRETE
- CONCRETE MASONRY UNITS
- BRICK
- CAST STONE
- CERAMIC TILE
- WOOD (FINISH)
- WOOD (STUDS, NAILERS)
- WOOD (BLOCKING)
- PLYWOOD
- BATT INSULATION
- RIGID INSULATION
- PLASTER
- ACOUSTIC TILE
- GYPSUM BOARD
- GLASS
- STEEL
- PARTICLE BOARD
- RIGID INSULATION

GRAPHIC SYMBOLS

- D2 / AE-501 — DETAIL/WALL or SECTION NUMBER; SHEET NUMBER
- 102 — DOOR NUMBER
- 5 — WINDOW NUMBER
- OFFICE / 100 — ROOM NAME; ROOM NUMBER
- 3 — REVISION NUMBER
- DETAIL, WALL or SECTION NUMBER; SHEET NUMBER
- A — GRID REFERENCE
- PLAN NORTH / ACTUAL NORTH — REFERENCE NORTH (PLANS)
- ELEVATION REFERENCE
- 3 — KEYED NOTE NUMBER
- A / B3 / AE201 / C / B / D — INTERIOR ELEVATION MARKER
- A — A — WALL TYPES

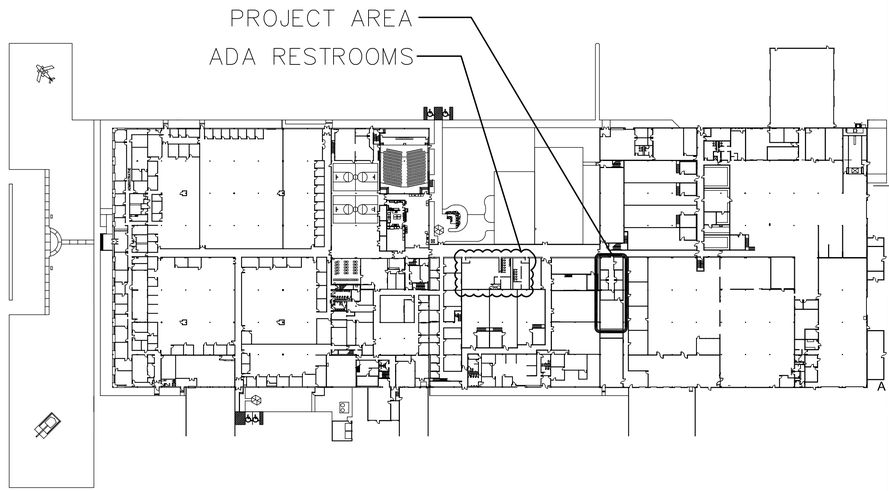
DRAWING SCHEDULE

SHEET #	DRAWING TITLE	SHEET OF
GI-001	TITLE SHEET	1 OF 17
GI-002	GENERAL INFORMATION	2 OF 17
AE-101	DEMOLITION PLAN, FLOOR PLAN & KEYED NOTES	3 OF 17
AE-102	REFLECTED CEILING PLAN & KEYED NOTES	4 OF 17
AE-501	DETAILS	5 OF 17
AE-601	SCHEDULES	6 OF 17
MI-000	MECHANICAL SYMBOLS AND LEGENDS	7 OF 17
MD-101	MECHANICAL DEMOLITION PLAN	8 OF 17
ME-101	MECHANICAL PLAN	9 OF 17
ME-102	MECHANICAL EQUIPMENT SCHEDULES AND DETAILS	10 OF 17
EE-001	SYMBOL LEGEND/SHEET INDEX	11 OF 17
EE-101	REFERENCE PLANS	12 OF 17
EE-102	DEMOLITION & FIRE ALARM PLANS	13 OF 17
EE-103	POWER & LIGHTING PLANS	14 OF 17
EE-501	DETAILS	15 OF 17
EE-502	DETAILS	16 OF 17
EE-601	SCHEDULES	17 OF 17



A5 VICINITY MAP
SCALE: NONE

NORTH



A4 KEY PLAN
SCALE: NONE

NORTH

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MARK	DATE	DESCRIPTION
	8/8/05	CONSTRUCTION DOCUMENTS

DFCM PROJECT NO: 05232470
ARCH. PROJECT NO: 05-26
CAD DWG FILE: GI-002.DWG
DRAWN BY: JBE
CHECKED BY: SPE
DESIGNED BY: SPE
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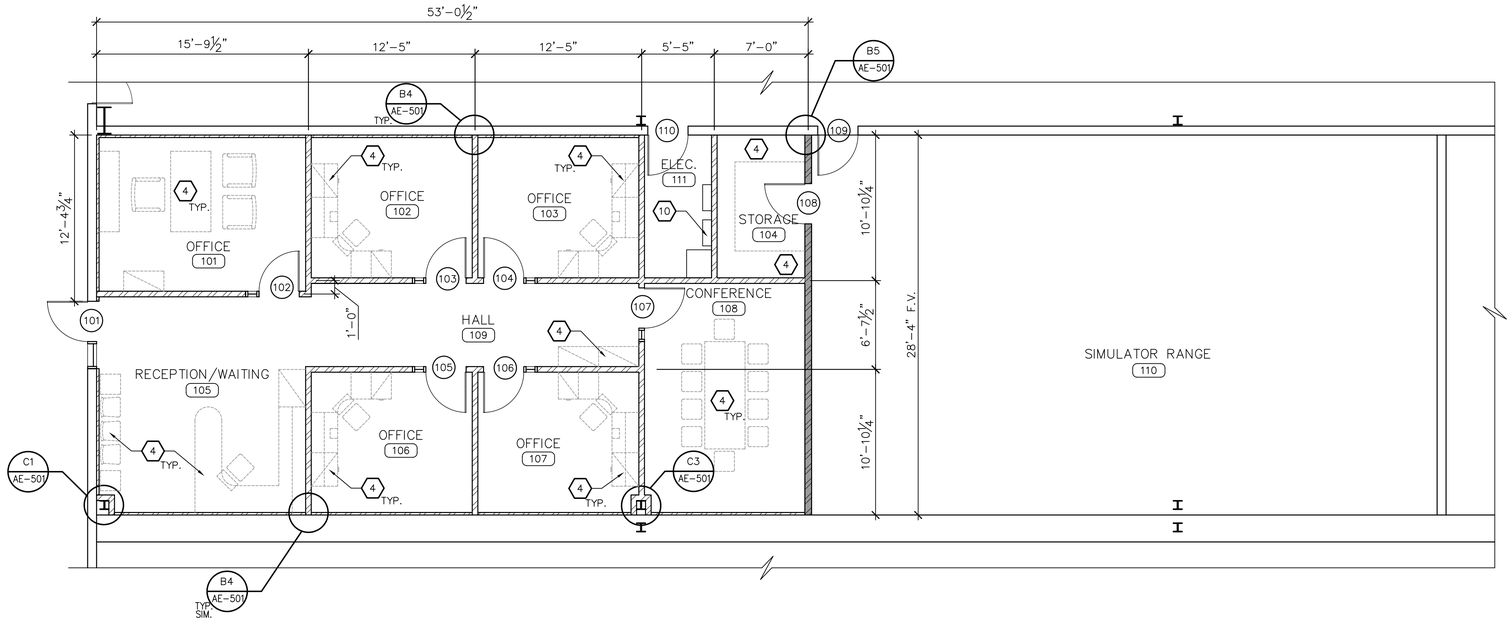
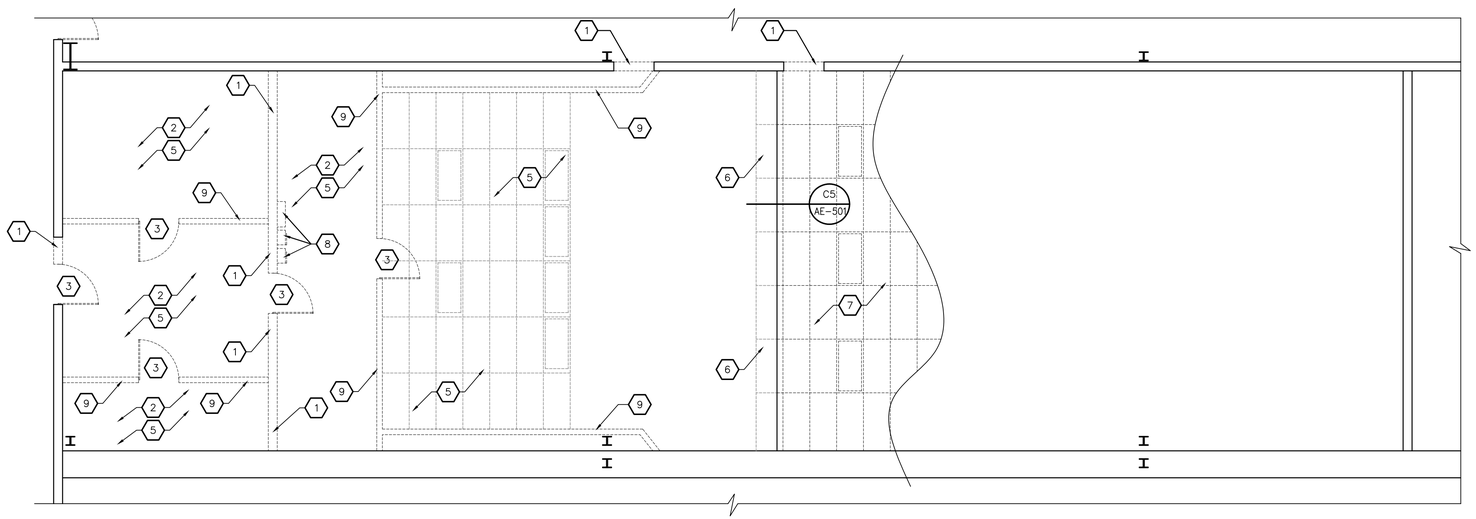
SHEET TITLE
GENERAL INFORMATION

GI-002
2 of 17



C1 FLOOR PLAN

SCALE 3/16" = 1'-0" 0 3' 6' 12' NORTH



A1 DEMOLITION PLAN

SCALE 3/16" = 1'-0" 0 3' 6' 12' NORTH

KEYED NOTES

1. EXTG. CMU WALL TO BE REMOVED SAW CUT AS REQUIRED.
2. EXTG. CARPET, VCT & ALL RELATED MATERIALS TO BE REMOVED.
3. EXTG. DOOR/FRAME TO BE REMOVED.
4. (NIC) FUTURE OFFICE FURNISHING TYP. SHOWN DASHED.
5. EXTG. CEILING SYSTEM & ALL RELATED MATERIALS TO BE REMOVED – SEE MECHANICAL & ELECTRICAL DEMOLITION DRAWINGS.
6. THIS PORTION OF EXTG. CEILING SYSTEM TO BE REMOVED – REFER TO DETAIL INDICATED.
7. EXTG. CEILING SYSTEM TO BE MODIFIED TO BUTT UP AGAINST THE NEW SOUND WALL RUNNING FROM ROOF DECK TO FLOOR – REFER TO DETAIL INDICATED.
8. EXTG. HVAC ELECTRICAL PANELS TO BE REMOVED – SEE ELECTRICAL DRAWINGS.
9. REMOVE EXTG. WALLS & ALL RELATED MATERIALS.
10. NEW ELECTRICAL ITEMS SEE ELECTRICAL DRAWINGS

KEY TO WALL TYPES

- EXTG. WALLS TO REMAIN.
- INDICATES WALL WITH 3⅝" 20 GA. METAL STUDS AT 16" O.C. WITH ⅝" TYPE "X" GYP. BD. EACH SIDE – EXTEND TO 6" ABOVE CEILING.
- INDICATES SOUND RATED WALL WITH 6" 20 GA. METAL STUDS @ 12" O.C. WITH ⅝" TYPE "X" GYP. BD. EACH SIDE – EXTEND FROM FLOOR TO DECK ABOVE – SEAL TIGHT AROUND ANY PENETRATIONS AND SEAL TIGHT TO DECK ABOVE – PROVIDE 3" SOUND ATTENUATION BLANKET BETWEEN STUDS AND ½" RESILIENT CHANNELS AT 16" O.C. UNDER GYP. BD. ON ONE SIDE OF STUD ONLY – CAULK PERIMETER WITH ACOUSTICAL CAULK.
- NEW FURRING CONSISTING OF ⅝" TYPE X GYP. BD. ON 1⅝" 20 GA. METAL STUDS @ 16" O.C. – EXTEND TO 6" ABOVE CEILING LEVEL.

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	8/8/05	CONSTRUCTION DOCUMENTS

DFCM PROJECT NO:	05232470
ARCH. PROJECT NO:	05-26
CAD DWG FILE:	AE-101.DWG
DRAWN BY:	JBE
CHECKED BY:	SPE
DESIGNED BY:	SPE

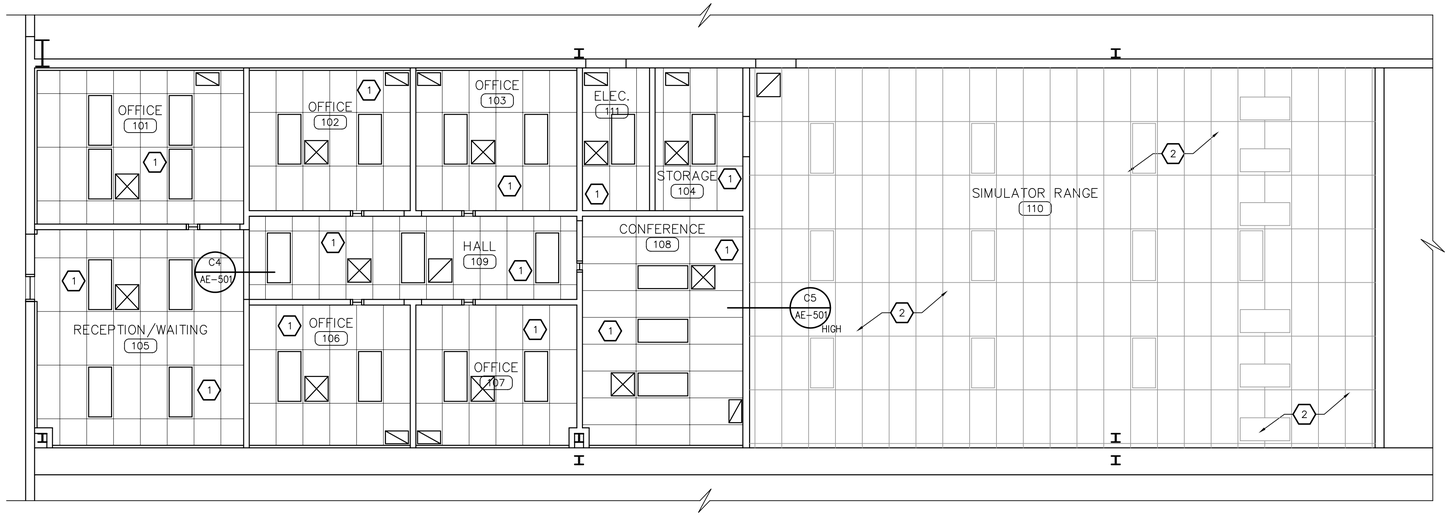
SHEET TITLE

DEMOLITION PLAN,
FLOOR PLAN
& KEYED NOTES

AE-101
3 of 17

KEYED NOTES

1. NEW 2X4 SUSPENDED ACOUSTICAL LAY-IN PANEL CEILING SYSTEM WITH METAL GRID – SEISMICALLY SUPPORT NEW CEILING AS REQUIRED – REFER TO DETAIL D4/AE-501 – SEE SPEC.
2. EXTG. CEILING SYSTEM TO BE MODIFIED TO BUTT UP AGAINST THE NEW SOUND WALL RUNNING FROM ROOF DECK TO FLOOR – REFER TO DETAIL INDICATED – EXTG. LIGHTING TO REMAIN.



A1 REFLECTED CEILING PLAN
SCALE 3/16" = 1'-0"
0 3' 6' 12'
NORTH

SYMBOLS

- NEW 2X4 RECESSED LIGHT FIXTURE – SEE ELECTRICAL DRAWINGS
- NEW HVAC SUPPLY AIR GRILLE – SEE MECHANICAL DRAWINGS
- NEW HVAC RETURN AIR GRILLE – SEE MECHANICAL DRAWINGS

COORDINATE ALL ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. FINAL LOCATIONS OF ALL LIGHTS, DIFFUSERS, EQUIPMENT, ETC., IF SHOWN DIFFERENTLY FROM EACH OTHER SHALL BE DETERMINED BY THE ARCHITECT.

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	8/8/05	CONSTRUCTION DOCUMENTS

DFCM PROJECT NO:	05232470
ARCH. PROJECT NO:	05-26
CAD DWG FILE:	AE-102.DWG
DRAWN BY:	JBE
CHECKED BY:	SPE
DESIGNED BY:	SPE

SHEET TITLE

REFLECTED CEILING PLAN
& KEYED NOTES

AE-102
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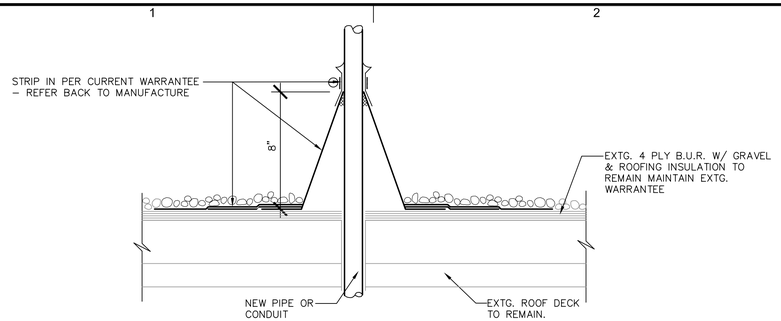
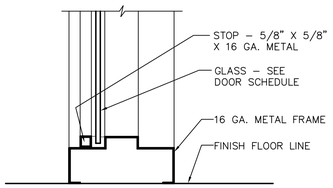
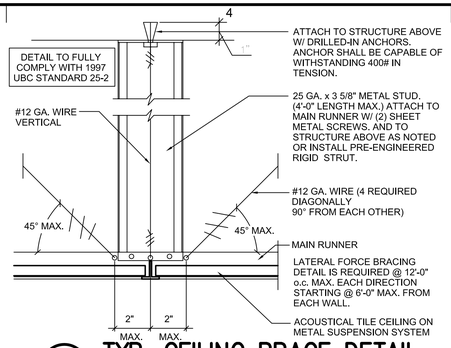


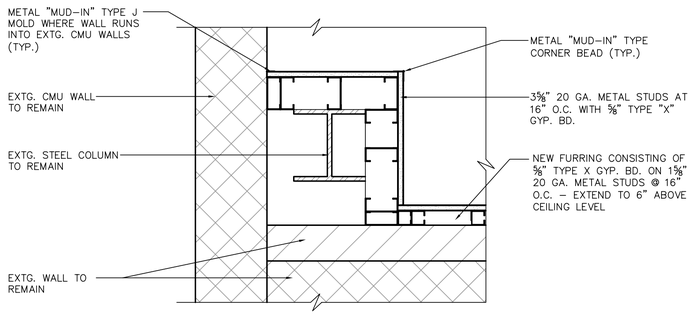
D1 (TYP.) PIPE/CONDUIT
SCALE 3" = 1'–0"



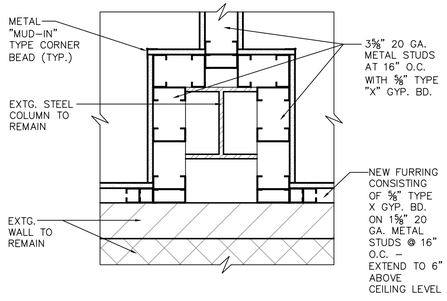
D3 SILL DETAIL
SCALE 3" = 1'–0"



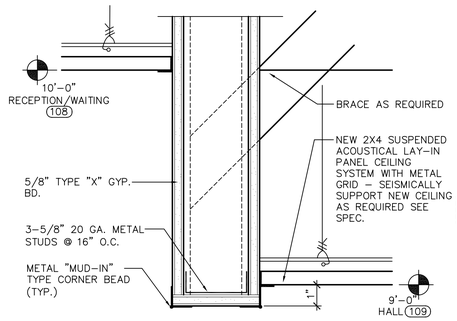
D4 TYP. CEILING BRACE DETAIL
SCALE 3" = 1'–0"



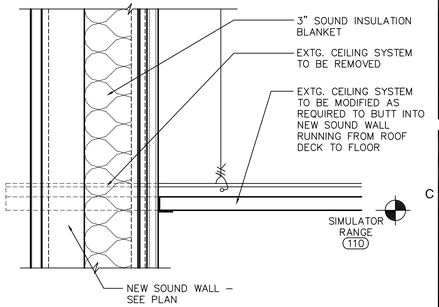
C1 DETAIL @ EXTG. STEEL COLUMN
SCALE 1 1/2" = 1'–0"



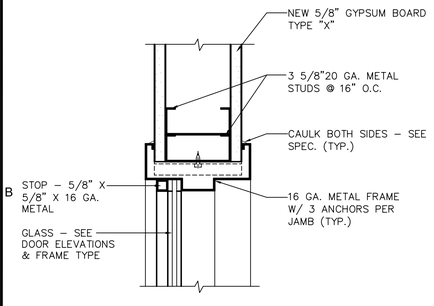
C3 DETAIL @ EXTG. STEEL COLUMN
SCALE 1 1/2" = 1'–0"



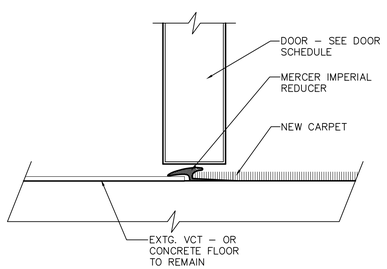
C4 CEILING STEP DETAIL
SCALE 3" = 1'–0"



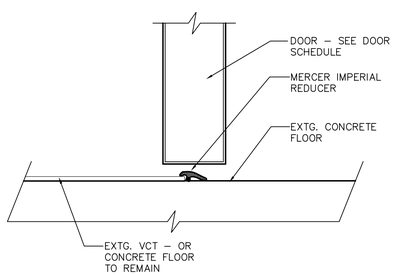
C5 CEILING STEP DETAIL
SCALE 3" = 1'–0"



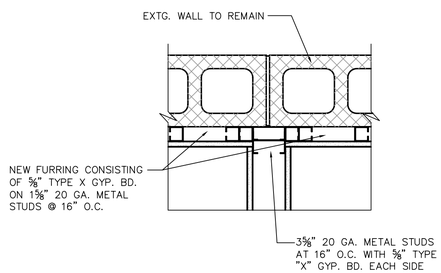
B1 WALL TO WINDOW DETAIL
SCALE 3" = 1'–0"



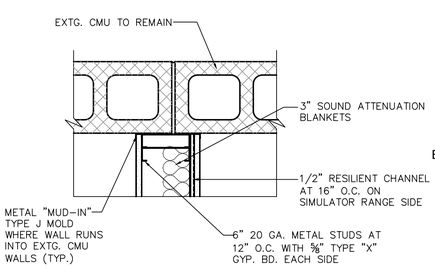
B2 THRESHOLD DETAIL
SCALE 6" = 1'–0"



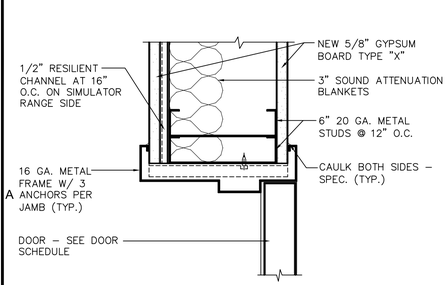
B3 THRESHOLD DETAIL
SCALE 6" = 1'–0"



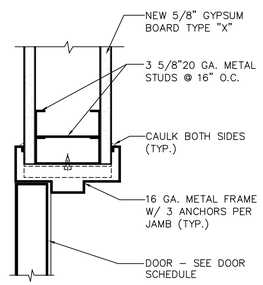
B4 DETAIL
SCALE 1 1/2" = 1'–0"



B5 DETAIL
SCALE 1 1/2" = 1'–0"



A1 DOOR JAMB DETAIL (HEAD SIM.)
SCALE 3" = 1'–0"



A2 DOOR JAMB DETAIL (HEAD SIM.)
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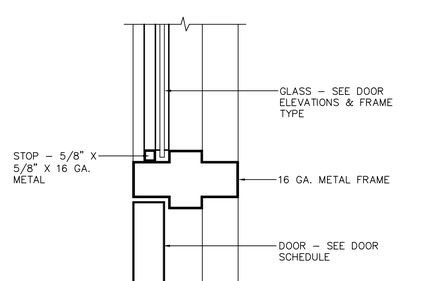
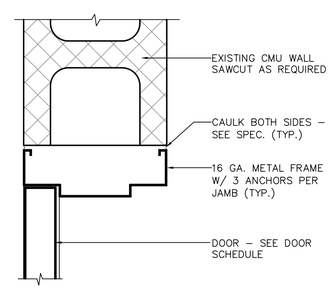


A3 DOOR JAMB (WINDOW)
SCALE 3" = 1'–0"



A4 DOOR JAMB DETAIL (HEAD SIM.)
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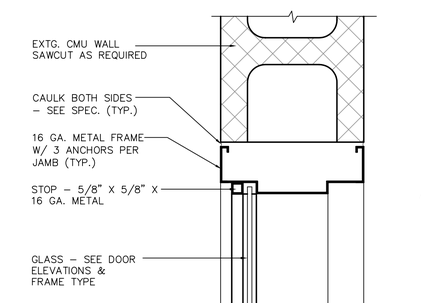

A5 WINDOW JAMB @ CMU
SCALE 3" = 1'–0"

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DESIGNED BY: SPE	

SHEET TITLE
DETAILS

AE-501
5 of 17

ROOM FINISH SCHEDULE

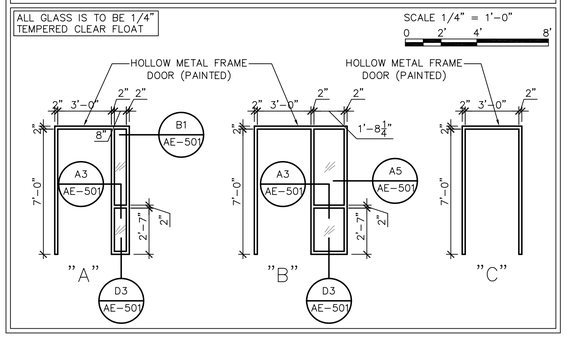
ROOM		FLOOR	BASE	WALLS								CEILING			REMARKS
				NORTH		EAST		SOUTH		WEST					
NUMBER	NAME			MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	HEIGHT	
101	Office	Carpet	Rubber	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	2x4 Susp. Panel	None	9'-0"	
102	Office	Carpet	Rubber	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	2x4 Susp. Panel	None	9'-0"	
103	Office	Carpet	Rubber	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	2x4 Susp. Panel	None	9'-0"	
104	Storage	VCT	Rubber	Gyp. Bd.	Paint	Extg. CMU	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	2x4 Susp. Panel	None	9'-0"	
105	Reception/Waiting	Carpet	Rubber	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	2x4 Susp. Panel	None	10'-0"	
106	Office	Carpet	Rubber	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	2x4 Susp. Panel	None	9'-0"	
107	Office	Carpet	Rubber	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	2x4 Susp. Panel	None	9'-0"	
108	Conference	Carpet	Rubber	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	2x4 Susp. Panel	None	9'-0"	
109	Hall	Carpet	Rubber	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	Open	None	2x4 Susp. Panel	None	9'-0"	
110	Simulator Range	Extg. Concrete	Rubber on North only	Gyp. Bd.	Paint	Extg.	Extg.	Extg.	Extg.	Extg.	Extg.	Extg.			Paint wall around door #109
111	Elec.	VCT	Rubber	Gyp. Bd.	Paint	Extg. CMU	Paint	Gyp. Bd.	Paint	Gyp. Bd.	Paint	2x4 Susp. Panel	None	9'-0"	Paint wall around door #110

DOOR SCHEDULE

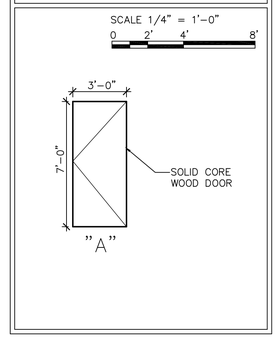
* FIELD VERIFY ALL DIMENSIONS *

MARK (#)	DOOR							FRAME/OPENING						SIGNAGE	HDWR	REMARKS
	SIZE			TYPE	MATERIAL	LABEL	FINISH	TYPE	MATERIAL	HEAD DETAIL	JAMB(R) DETAIL	JAMB(L) DETAIL	THRESHOLD DETAIL			
	WIDTH	HGT	THK													
101	3'-0"	7'-0"	1-3/4"	A	SC Wood	None	Transparent	B	Hollow Metal	A4/AE-501	A3/AE-501	A4/AE-501	B2/AE-501		H-1	Frame to match wall thickness
102	3'-0"	7'-0"	1-3/4"	A	SC Wood	None	Transparent	A	Hollow Metal	A2/AE-501	A3/AE-501	A2/AE-501	None		H-2	
103	3'-0"	7'-0"	1-3/4"	A	SC Wood	None	Transparent	A	Hollow Metal	A2/AE-501	A2/AE-501	A3/AE-501	None		H-2	
104	3'-0"	7'-0"	1-3/4"	A	SC Wood	None	Transparent	A	Hollow Metal	A2/AE-501	A3/AE-501	A3/AE-501	None		H-2	
105	3'-0"	7'-0"	1-3/4"	A	SC Wood	None	Transparent	A	Hollow Metal	A2/AE-501	A3/AE-501	A2/AE-501	None		H-2	
106	3'-0"	7'-0"	1-3/4"	A	SC Wood	None	Transparent	A	Hollow Metal	A2/AE-501	A2/AE-501	A3/AE-501	None		H-2	
107	3'-0"	7'-0"	1-3/4"	A	SC Wood	None	Transparent	A	Hollow Metal	A2/AE-501	A3/AE-501	A2/AE-501	None		H-3	
108	3'-0"	7'-0"	1-3/4"	A	SC Wood	None	Transparent	C	Hollow Metal	A2/AE-501	A2/AE-501	A2/AE-501	None		H-3	
109	3'-0"	7'-0"	1-3/4"	A	SC Wood	None	Transparent	C	Hollow Metal	A4/AE-501	A4/AE-501	A4/AE-501	B3/AE-501		H-1	Frame to match wall thickness
110	3'-0"	7'-0"	1-3/4"	A	SC Wood	None	Transparent	C	Hollow Metal	A4/AE-501	A4/AE-501	A4/AE-501	B3/AE-501		H-1	Frame to match wall thickness

DOOR FRAMES



DOOR TYPES



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MARK	DATE	DESCRIPTION
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DFCM PROJECT NO: 05232470
ARCH. PROJECT NO: 05-26
CAD DWG FILE: AE-601.DWG
DRAWN BY: JBE
CHECKED BY: SPE
DESIGNED BY: SPE

SHEET TITLE
SCHEDULES

AE-601

LEGEND OF MECHANICAL SYMBOLS AND ABBREVIATIONS

SINGLE LINE	DOUBLE LINE	DESCRIPTION
		POSITIVE PRESSURE DUCT – RISE
		POSITIVE PRESSURE DUCT – DROP
		NEGATIVE PRESSURE DUCT – RISE
		NEGATIVE PRESSURE DUCT – DROP
		ROUND DUCT – RISE
		ROUND DUCT – DROP
		UNDER FLOOR DUCT
		TURNING VANES
		FRESH AIR LOUVER
		RELIEF AIR OR EXHAUST AIR LOUVER
	12X12 / 200	CEILING SUPPLY DIFFUSER
	20X20 / 200	CEILING RETURN REGISTER
	12X12 / 200	CEILING EXHAUST REGISTER, (BALANCE TO MATCH SUPPLY IF RETURN CFM IS NOT SHOWN)
	24X10 / 200	SIDEWALL SUPPLY REGISTER
	24X10 / 200	SIDEWALL EXHAUST OR RETURN REGISTER
	12X12 / 200	CEILING SUPPLY DIFFUSER WITH FLEXIBLE DUCT
	24/24	CEILING RETURN AIR GRILLE W/ SOUND BOOT
	3–1" SLOTS @ 48" 400	LINEAR DIFFUSER WITH PLENUM AND FLEXIBLE DUCT CONNECTION. NO. OF SLOTS ON TOP, ACTIVE LENGTH AND CFM ON BOTTOM
		FLEXIBLE DUCT CONNECTION
		FLEXIBLE DUCT
		FAN
12/8	12/8	RECTANGULAR DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
12"ø	12"ø	ROUND DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
UP	UP	INCLINED RISE
DN	DN	INCLINED DROP
	W, R	R/W=1. ROUND DUCT SIMILAR TO RECTANGULAR
12/12 8/8	12/12 8/8	RECTANGULAR TO RECTANGULAR OR ROUND TO ROUND DUCT TRANSFORMATION MAXIMUM 15° INCLUDED ANGLE EXCEPT WHERE SHOWN OTHERWISE.
9/9 9"ø	9/9 9"ø	RECTANGULAR TO ROUND DUCT TRANSFORMATION
6	R, 6	BRANCH DUCT SPLIT WITH 6" WIDTH AND MIN. R=WIDTH OF BRANCH DUCT DOWNSTREAM. ELBOW TURNING VANE OPTIONAL.
RECT. TO ø, RECT, ROUND, ALL	1.50, 1.250, 45°, D, D	TAP ENTRY AREA EQUALS 150% OF BRANCH AREA
		MANUAL VOLUME DAMPER
FD	FD	FIRE DAMPER IN DUCT, W/ ACCESS PANEL REQD.
FSD	FSD	COMBINATION FIRE/SMOKE DAMPER W/ ACCESS PANEL
SD	SD	SMOKE DAMPER W/ ACCESS PANEL
OR	OR	ATC DAMPER
AD	AD	ACCESS PANEL IN DUCT OR PLENUM
		HEATING OR COOLING COIL IN DUCT
		SINGLE DUCT AIR TERMINAL BOX VARIABLE OR CONSTANT VOLUME. MIN. 1–1/2 TERMINAL INLET SIZE STRAIGHT DUCT AT TERMINAL INLET.

CEILING SUPPLY DIFFUSER THROUGH CEILING RETURN AIR GRILLE: TOP FIGURES INDICATE NECK SIZE. BOTTOM FIGURE INDICATES CFM.

INCLINED RISE / INCLINED DROP: WITH RESPECT TO AIR FLOW 15° NOMINAL INCLINE WITH RADIUS TURNS=DEPTH OF DUCT.

SYMBOL	DESCRIPTION
	4–WAY BLOW PATTERN
	3–WAY BLOW PATTERN
	2–WAY BLOW PATTERN
	2–WAY BLOW PATTERN
	1–WAY BLOW PATTERN
G	NATURAL GAS
(E)name	EXISTING PIPING
HWS	HEATING HOT WATER SUPPLY
HWR	HEATING HOT WATER RETURN
(NAME)	EXISTING PIPING TO BE REMOVED
	DEMOLITION
	PRESSURE REDUCING, SELF CONTAINED VALVE
	GAS COCK
T	THERMOSTAT
T N	NIGHT THERMOSTAT
	ARROW INDICATES DIRECTION OF FLOW IN PIPE
DN	LEADER INDICATES DOWNWARD SLOPE
	PIPE INTO PLANE
	PIPE OUT OF PLANE
	PIPE BRANCH – IN TO PLANE
	PIPE BRANCH – OUT OF PLANE
	PIPE BRANCH – IN PLANE
	POINT OF CONNECTION TO EXISTING
1 / M1–1	DETAIL TAG – TOP FIGURE IS DETAIL NO. BOTTOM FIGURE IS SHEET NO.
EF / 1	EQUIPMENT IDENTIFICATION
1	KEYED NOTE IDENTIFICATION

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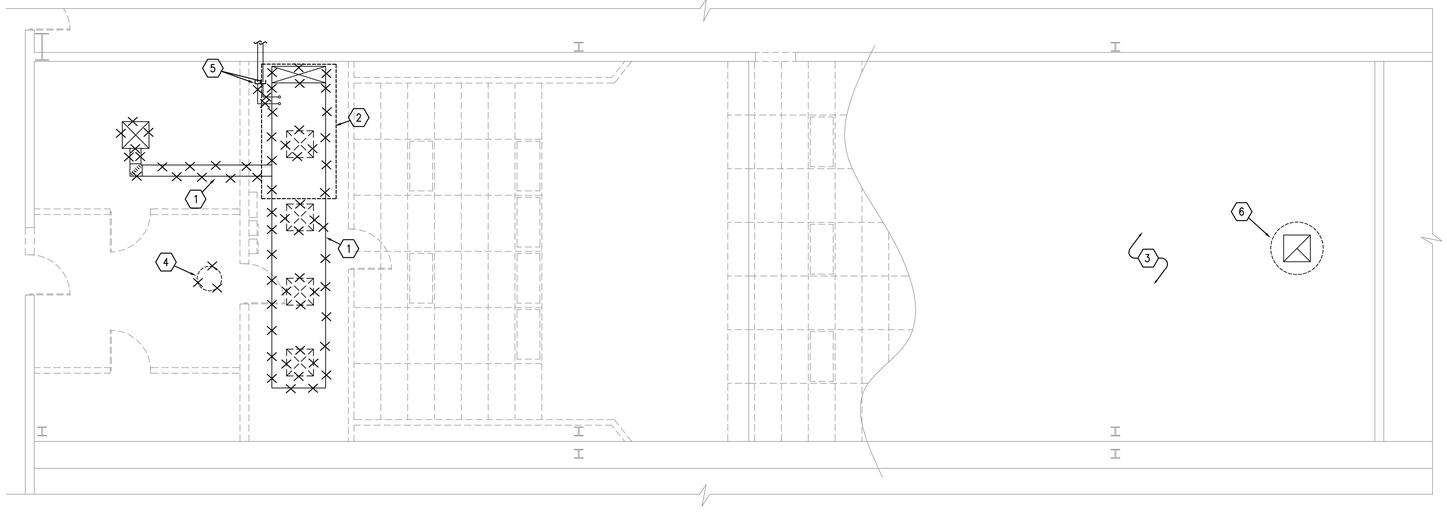
MECHANICAL
SYMBOLS AND LEGENDS

MI-000



KEYED NOTES

1. DEMOLISH AND REMOVE EXISTING MAKE–UP AIR DUCTWORK AND ASSOCIATED DIFFUSERS. FIELD VERIFY EXACT LOCATION.
2. DEMOLISH AND REMOVE EXISTING ROOF MOUNTED MAKE–UP AIR UNIT AND ALL ASSOCIATED CONTROLS. FIELD VERIFY EXACT LOCATION.
3. EXISTING DUCTWORK IN THIS SPACE TO REMAIN.
4. DEMOLISH AND REMOVE EXISTING ROOF HOOD. FEILD VERIFY EXACT LOCATION.
5. CAP EXISTING HOT WATER SUPPLY AND RETURN PIPING SERVING EXISTING MAKE–UP AIR UNIT. CAPS TO BE DONE BELOW ROOF LEVEL. FIELD VERIFY EXACT LOCATION OF EXISTING HEATING WATER SUPPLY AND RETURN LINES.
6. EXISTING ROOF MOUNTED EXHAUST FAN TO REMAIN.

A1 MECHANICAL DEMOLITION PLAN
SCALE 3/16" = 1'–0" 0 3' 6' 12'

PLAN NORTH / ACTUAL NORTH

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SHEET TITLE
MECHANICAL
DEMOLITION PLAN

MD-101
8 OF 17

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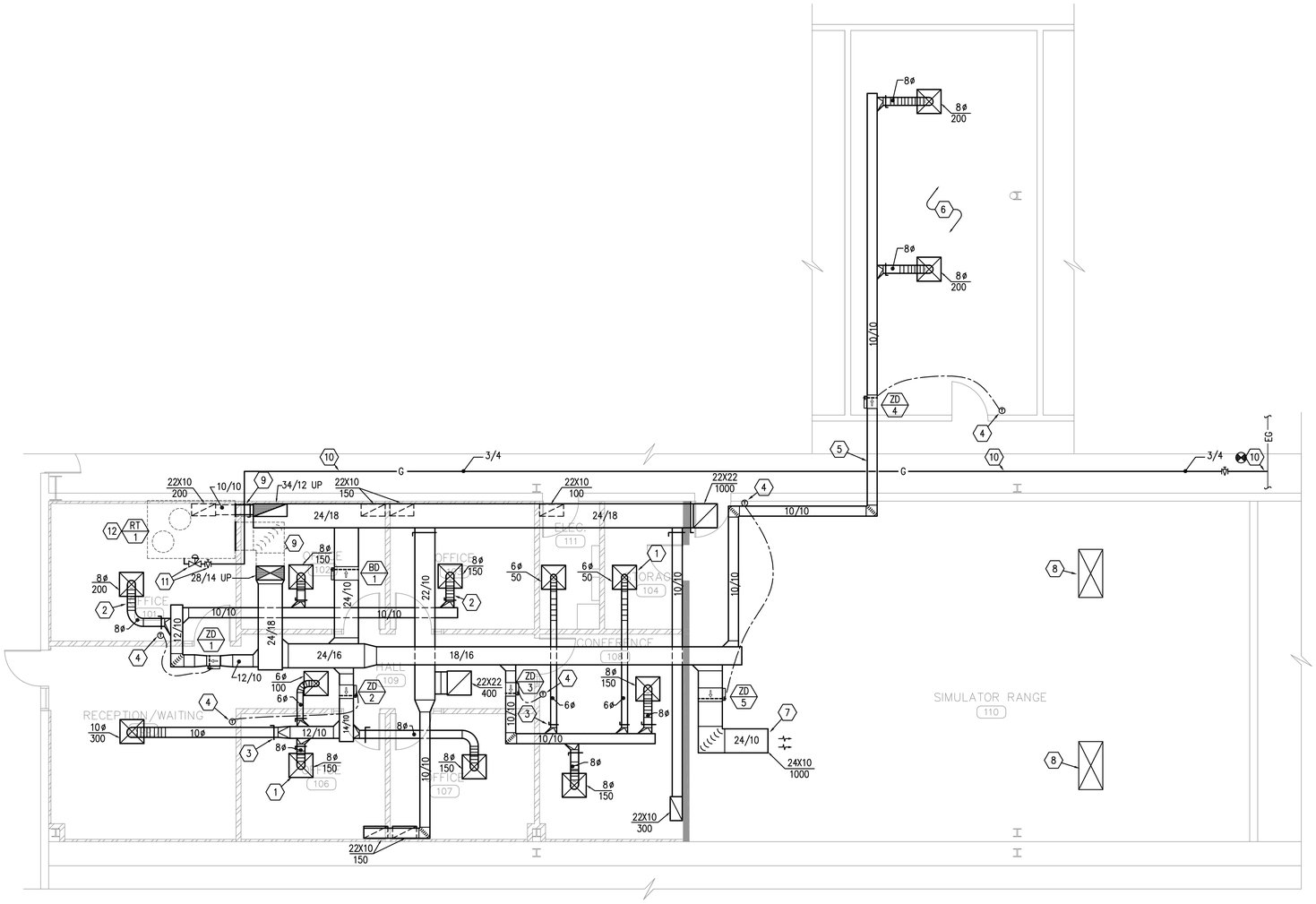

KEYED NOTES

1. COORDINATE LOCATION OF ALL DIFFUSERS, REGISTERS, AND GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN, TYPICAL.
2. MAXIMUM OF 6'-0" FLEXIBLE DUCTWORK TO DIFFUSER, TYPICAL.
3. PROVIDE MANUAL VOLUME DAMPER ON ALL BRANCH LINES TO DIFFUSERS, TYPICAL.
4. COORDINATE LOCATION OF THERMOSTAT WITH ARCHITECTURAL, TYPICAL.
5. EXTEND DUCTWORK ACROSS CORRIDOR TO SERVE OFFICE SPACE.
6. FIELD VERIFY REFLECTED CEILING PLAN IN EXISTING OFFICE SPACE. COORDINATE LOCATION OF NEW DIFFUSERS WITH EXISTING CEILING.
7. TERMINATE DUCTWORK ABOVE CEILING. SUPPLY AIR TO BLOW INTO CEILING PLENUM.
8. REMOVE CEILING PANEL AT LOCATIONS SHOWN TO ALLOW SUPPLY AIR FROM PLENUM TO ENTER SPACE. COORDINATE WITH LAYOUT OF EXISTING CEILING IN SIMULATOR RANGE.
9. DUCTWORK TO BE RUN ON ROOF FROM HORIZONTAL DISCHARGE OPENINGS ON ROOFTOP UNIT TO VERTICAL DROPS DOWN INTO SPACE.
10. NEW GAS SERVICE LINE TO BE RUN ON ROOF. CONNECT NEW GAS LINE TO EXISTING GAS SERVICE LOCATED ON ROOF.
11. PROVIDE PRESSURE REGULATOR AND GAS COCK FOR NEW ROOFTOP UNIT TO PROVIDE 4 OZ PRESSURE TO MECHANICAL EQUIPMENT.
12. MOUNT NEW ROOFTOP UNIT ON 14" HIGH FACTORY ROOFCURB. COORDINATE LOCATION OF NEW EQUIPMENT WITH EXISTING EQUIPMENT LOCATED ON ROOF.

A1 MECHANICAL PLAN

SCALE 3/16" = 1'-0" 0 3' 6' 12'

PLAN NORTH / ACTUAL NORTH

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MECHANICAL PLAN

ME-101
9 OF 17

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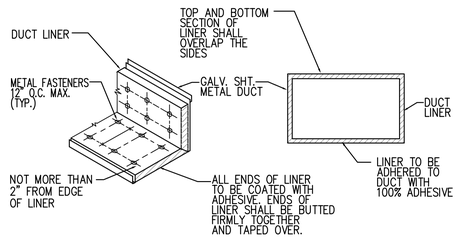
DAMPER SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	USE TYPE	PRIMARY INLET SIZE (IN)	AIR		ELECTRICAL	REMARKS
				AIRFLOW RATE (CFM)	STATIC PRESSURE DROP		
ZD-1	CARRIER 33ZCD1008ZC-01	ZONE DAMPER	10/8	500	0.01	120/1	
ZD-2	CARRIER 33ZCD1408ZC-01	ZONE DAMPER	14/8	700	0.01	120/1	
ZD-3	CARRIER 33ZCD1008ZC-01	ZONE DAMPER	10/8	400	0.01	120/1	
ZD-3	CARRIER 33ZCD1008ZC-01	ZONE DAMPER	10/8	400	0.01	120/1	
ZD-3	CARRIER 33ZCD2408ZC-01	ZONE DAMPER	24/8	1000	0.01	120/1	
BD-1	CARRIER 33ZCD2408ZC-01	ZONE DAMPER	24/8	2000	0.06	120/1	

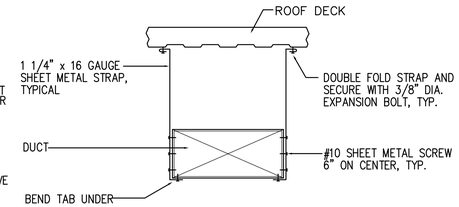
ROOFTOP UNIT SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	AIR			HEATING SECTION			COOLING SECTION				ELECTRICAL			PHYSICAL		NOTES
				SUPPLY AIR FLOW RATE (CFM)	OUTSIDE AIR FLOW RATE (CFM)	EXTERNAL STATIC PRESSURE DROP (IN H20)	MINIMUM HEATING OUTPUT (MBH)	ENTERING/ LEAVING TEMP. DB/WB (°F)	WORKING FLUID	MINIMUM COOLING LOAD (MBH)	ENTERING TEMP. (DB/WB °F)	LEAVING TEMP. (DB/WB °F)	WORKING FLUID	EVAP. FAN MOTOR SIZE (HP)	UNIT POWER MCA (AMPS)	VOLT/PH	LENGTH/ WIDTH/ HEIGHT (IN)	EFFICIENCY (%)	
RT-1	CARRIER 48TMD008-A-6	ROOF	PACKAGED	3000	660	0.6	72.0	60.8 / 88.8	NG	75.8	95 /62	52.7 /52.4	R-22	3.0	18.4	460 /3	88/58/42	–	1, 2

1. PROVIDE WITH 14" HIGH ROOF CURB
2. CONSTANT VOLUME UNIT

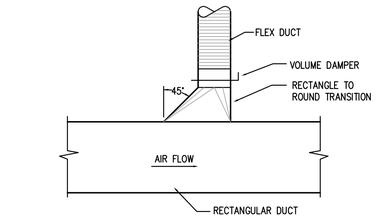


5 / ME-102 **DUCT LINER DETAIL**
NO SCALE

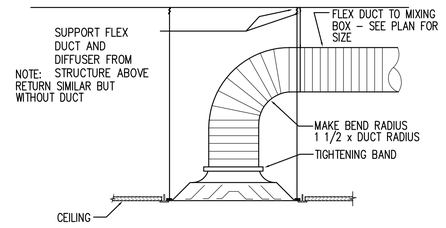


NOTE:
USE SPECIFIED SPACING AND NOT LESS THAN ONE SUPPORT PER BRANCH.

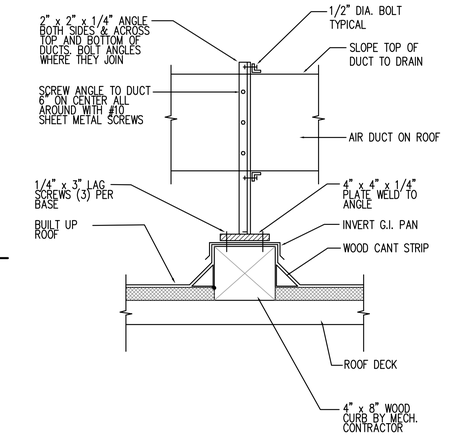
2 / ME-102 **RECTANGULAR DUCT SUPPORT**
NO SCALE



4 / ME-102 **HIGH EFFICIENCY TAKE-OFF DETAIL**
NO SCALE



3 / ME-102 **DIFFUSER CONNECTION DETAIL**
NO SCALE



NOTES:

1. SUPPORT DUCT AT 8'-0" ON CENTER MAXIMUM AND AT ALL OFFSETS AND CHANGE OF DIRECTION.
2. ALL STEEL AND BOLTS HOT-DIPPED GALVANIZED AFTER FABRICATION.
3. SUPPORT OF SOUND TRAPS ON ROOF SIMILAR.
4. OMIT SCREWS AT FUME EXHAUST DUCTS AND BOLT ANGLES TO DUCT COMPANION ANGLE FLANGES.

1 / ME-102 **DUCT SUPPORT ON ROOF**
NO SCALE

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MECHANICAL EQUIPMENT SCHEDULES AND DETAILS

ME-102
10 OF 17

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CONDUCTOR AND CONDUIT SCHEDULE

(**) SCHEDULE NUMBER
SUBSCRIPT (NOTE 5) (E.G.) 5 IG

SYM	AMP	CONDUIT SIZE	CONDUCTOR(NOTE 1) QTY	SIZE	GR	IG	SE	NOTES
1	20	.75	2	12	12	12	8	2
2	20	.75	3	12	12	12	8	2,3
3	20	.75	4	12	12	12	8	2,3
4	30	.75	2	10	10	10	8	2
5	30	.75	3	10	10	10	8	2
6	30	.75	4	10	10	10	8	2
7	40	1	2	8	10	8	6	2
8	40	1	3	8	10	8	6	2
9	40	1	4	8	10	8	6	2
10	55	1	2	6	10	8	4	2
11	55	1	3	6	10	8	4	2
12	55	1.25	4	6	10	8	4	2
13	70	1	2	4	8	4	2	2
14	70	1.25	3	4	8	4	2	2
15	70	1.25	4	4	8	4	2	2
16	85	1.25	2	3	8	3	2	2
17	85	1.25	3	3	8	3	2	2
18	85	1.25	4	3	8	3	2	2
19	95	1.25	3	2	8	2	2	2
20	95	1.50	4	2	8	2	2	2
21	130	1.50	3	1	6	2	2	2
22	130	1.50	4	1	6	2	2	2
23	150	2	3	1/0	6	2	1/0	2
24	150	2	4	1/0	6	2	1/0	2
25	175	2	3	2/0	6	2	2/0	2
26	175	2	4	2/0	6	2	2/0	2
27	200	2	3	3/0	6	2	2/0	2
28	200	2.50	4	3/0	6	2	2/0	2
29	230	2.50	3	4/0	4	2	2/0	2
30	230	2.50	4	4/0	4	2	2/0	2
31	255	2.50	3	250	4	1	2/0	2
32	255	2.50	4	250	4	1	2/0	2
33	310	3	3	350	3	1/0	3/0	2
34	310	3	4	350	3	1/0	3/0	2
35	380	3.50	3	500	3	3/0	3/0	2
36	380	4	4	500	3	3/0	3/0	2
37	400	2 EA 2	3	3/0	3	3/0	3/0	2
38	400	2 EA 2.50	4	3/0	3	3/0	3/0	2
39	510	2 EA 2.50	3	250	1	4/0	3/0	2
40	510	2 EA 3	4	250	1	4/0	3/0	2
41	620	2 EA 3	3	350	1/0	4/0	3/0	2,4
42	620	2 EA 3	4	350	1/0	4/0	3/0	2,4
43	760	2 EA 3.50	3	500	1/0	4/0	3/0	2,4
44	760	2 EA 4	4	500	1/0	4/0	3/0	2,4
45	855	3 EA 3	3	300	2/0	4/0	3/0	2,4
46	855	3 EA 3	4	300	2/0	4/0	3/0	2,4
47	1000	3 EA 3.50	3	400	2/0	4/0	3/0	4
48	1000	3 EA 3.50	4	400	2/0	4/0	3/0	4
49	1140	3 EA 4	3	500	3/0	4/0	3/0	4
50	1140	3 EA 4	4	500	3/0	4/0	3/0	4
51	1240	4 EA 3	3	350	3/0	4/0	3/0	4
52	1240	4 EA 3	4	350	3/0	4/0	3/0	4
53	1675	5 EA 3.50	4	400	4/0	4/0	4/0	4
54	2010	6 EA 3.50	4	400	250	250	250	4
55	2660	7 EA 4	4	500	350	350	350	4
56	3040	8 EA 4	4	500	500	500	500	4
57	4180	11 EA 4	4	500	500	500	500	4
58		5 EA 4						6
59		5						6
60		10 EA 4						6

CONDUCTOR AND CONDUIT SCHEDULE NOTES

1. CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 5. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
2. PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN TABLE.
3. PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING COMPUTERS.
4. GROUND (G) CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS.
5. WHEN SYMBOL SUBSCRIPT INDICATES "IG", INCLUDE "IG" OR INSULATED GROUND CONDUCTOR SCHEDULED ALONG WITH GROUND OR EQUIPMENT GROUND CONDUCTOR. WHEN SYMBOL SUBSCRIPT INDICATES "SE", SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEMS.
6. RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY.

SYMBOL LEGEND

SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
A5 / E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
A5 / E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
100	ROOM OR SPACE NUMBER.
1	KEYNOTE INDICATOR.
1	REVISION INDICATOR.
CU-1	EQUIPMENT INDICATOR.
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING.
	BREAK, ROUND.
	NEW LINE: MEDIUM LINE.
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE.
	EXISTING TO REMAIN LINE: THIN LINE.
	DEMOLITION LINE: DASHED, MEDIUM LINE.
WIRING METHODS	
	WIRING.
A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN SECTION 16120.
1 A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE. FOR BRANCH WIRING USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN SECTION 16120.
	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.
	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.
1	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
J	JUNCTION BOX.
C C	CABLE TRAY.
	EARTH GROUND (ONE-LINE DIAGRAM).
LIGHTING (REFER TO FIXTURE SCHEDULE FOR SYMBOLS)	
(W-3)	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
LIGHTING CONTROL	
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, CEILING.
SP	OCCUPANCY SENSOR SWITCH PACK.
STRUCTURED CABLING	
	OUTLET, BUILDING STANDARD COMBINATION TELEPHONE/ DATA COMMUNICATION.
	TELEPHONE TERMINAL BOARD, FIRE TREATED PLYWOOD PAINTED.
WIRING DEVICES	
	RECEPTACLE, DUPLEX: NEMA 5-20R.
A	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
	SWITCH, DIMMER.
X $	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).
FIRE ALARM	
	DETECTOR, SMOKE.
75	ALARM, HORN/STROBE, ONE ASSEMBLY. SUBSCRIPT INDICATES CANDELA RATING.

SYMBOL LEGEND

SYMBOL	DESCRIPTION
ELECTRICAL POWER AND DISTRIBUTION	
	DISCONNECT, FUSED (ONE-LINE DIAGRAM).
	TRANSFORMER (ONE-LINE DIAGRAM).
225/3 "1H"	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
225/3 "1H"	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
225/3 "1H" 60/3	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM).
	DISCONNECT SWITCH, FUSED.
	DISCONNECT SWITCH, UNFUSED.
	STARTER, COMBINATION WITH DISCONNECT SWITCH.
	STARTER OR MOTOR CONTROLLER.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
DP#__	DISTRIBUTION PANEL OR SWITCHBOARD.
LP	LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.
$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION.
75	TRANSFORMER: NUMBER INDICATES kVA.

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

1P	SINGLE POLE	kVAR	KILOVOLT AMPERE REACTIVE
1PH	SINGLE-PHASE	kW	KILOWATT
1WAY	ONE-WAY	kWh	KILOWATT HOUR
2/C	TWO-CONDUCTOR	LED	LIGHT EMITTING DIODE
2WAY	TWO-WAY	LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
3/C	THREE-CONDUCTOR	LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
3PH	THREE-PHASE	LPS	LOW PRESSURE SODIUM
3WAY	THREE-WAY	LRA	LOCKED ROTOR AMPS
4OUT	QUADRUPLE RECEPTACLE OUTLET	LTG	LIGHTING
4PDT	FOUR-POLE DOUBLE THROW	LV	LOW VOLTAGE
4PST	FOUR-POLE SINGLE THROW	MATV	MASTER ANTENNA TELEVISION SYSTEM
4W	FOUR-WIRE	MAX	MAXIMUM
4WAY	FOUR-WAY	MC	METAL CLAD
AC	ARMORED CABLE	MCA	MINIMUM CIRCUIT AMPS
ADA	AMERICANS WITH DISABILITIES ACT	MCB	MAIN CIRCUIT BREAKER
ADJ	ADJACENT	MCC	MOTOR CONTROL CENTER
AFF	ABOVE FINISHED FLOOR	MCP	MOTOR CIRCUIT PROTECTION
AFG	ABOVE FINISHED GRADE	MDP	MAIN DISTRIBUTION PANEL
AIC	AMPERE INTERRUPTING CAPACITY	MG	MOTOR GENERATOR
ALUM	ALUMINUM	MH	MANHOLE
AMP	AMPERE	MIN	MINIMUM
ANN	ANNUNCIATOR	MLO	MAIN LUGS ONLY
AR	AS REQUIRED	MOCP	MAXIMUM OVERCURRENT PROTECTION
ASC	AMPS SHORT CIRCUIT	NA	NOT APPLICABLE
ATS	AUTOMATIC TRANSFER SWITCH	NC	NORMALLY CLOSED
AV	AUDIO VISUAL	NEC	NATIONAL ELECTRICAL CODE
AWG	AMERICAN WIRE GAGE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
BB XFMR	BUCK-BOOST TRANSFORMER	NFC	NATIONAL FIRE CODE
CATV	COMMUNITY ANTENNA TELEVISION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CB	CIRCUIT BREAKER	NIC	NOT IN CONTRACT
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT	NL	NIGHT LIGHT
CCTV	CLOSED CIRCUIT TELEVISION	NO	NORMALLY OPEN
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT	NTS	NOT TO SCALE
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED	OC	ON CENTER
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED	OCP	OVER CURRENT PROTECTION
CKT	CIRCUIT	OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
CM	CONSTRUCTION MANAGER	OF/OI	OWNER FURNISHED/ OWNER INSTALLED
CND	CONDUIT	OFP	OBTAIN FROM PLANS
CO	CONVENIENCE OUTLET	OH DR	OVERHEAD (COILING) DOOR
COR	CONTRACTING OFFICER'S REPRESENTATIVE	OL	OVERLOAD
CP	CONTROL PANEL	PB	PUSHBUTTON
CT	CURRENT TRANSFORMER	PF	POWER FACTOR
CTV	CABLE TELEVISION	PH	PHASE
CU	COPPER	PNL	PANEL
dBA	UNIT OF SOUND LEVEL	PT	POTENTIAL TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW	QTY	QUANTITY
DS	DISCONNECT SWITCH	R	REMOVE
EA	EACH	RCP	REFLECTED CEILING PLAN
EM	EMERGENCY	RMC	RIGID METAL CONDUIT
EMT	ELECTRICAL METALLIC TUBING	RNC	RIGID NONMETALLIC CONDUIT
ENT	ELECTRICAL NONMETALLIC TUBING	RPM	REVOLUTIONS PER MINUTE
EPO	EMERGENCY POWER OFF	RR	REMOVE AND RELOCATE
EQUIP	EQUIPMENT	SCA	SHORT CIRCUIT AMPS
EXIST	EXISTING	SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
FA	FIRE ALARM	SF	SQUARE FOOT (FEET)
FCP	FIRE ALARM CONTROL PANEL	SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
FLA	FULL LOAD AMPS	SPDT	SINGLE POLE, DOUBLE THROW
FMC	FLEXIBLE METALCONDUIT	SPEC	SPECIFICATION
FOB	FREIGHT ON BOARD	SPST	SINGLE POLE, SINGLE THROW
FVNR	FULL VOLTAGE NON-REVERSING	S/S	START/STOP
FVR	FULL VOLTAGE REVERSING	ST	SINGLE THROW
G	GROUND	SWBD	SWITCHBOARD
GEN	GENERATOR	SWGR	SWITCHGEAR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TL	TWIST LOCK
GFP	GROUND FAULT PROTECTION	TP	TELEPHONE POLE
HD	HEAVY DUTY	TP	TWISTED PAIR
HID	HIGH INTENSITY DISCHARGE	TTB	TELEPHONE TERMINAL BOARD
HOA	HAND-OFF-AUTOMATIC	TV	TELEVISION
HP	HORSE POWER	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
HPF	HIGH POWER FACTOR	TYP	TYPICAL
HPS	HIGH PRESSURE SODIUM	UF	UNDERFLOOR
HV	HIGH VOLTAGE	UGND	UNDERGROUND
HZ	HERTZ	UPS	UNINTERRUPTIBLE POWER SUPPLY
IG	ISOLATED GROUND	V	VOLTS
IMC	INTERMEDIATE METAL CONDUIT	VA	VOLT AMPERE
IN/IS	INSULATED/ISOLATED	VFC	VARIABLE FREQUENCY CONTROLLER
I/O	INPUT/OUTPUT	W/	WITH
IR	INFRARED	W/O	WITHOUT
KV	KILOVOLT	WP	WEATHERPROOF
KVA	KILOVOLT AMPERE	XFMR	TRANSFORMER

ELECTRICAL SHEET INDEX

GENERAL ELECTRICAL NOTES

1. CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.
2. OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.

   A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.

   B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.

   C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE. THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.
3. EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.
4. SUBMITTALS: PROVIDE SUBMITTALS IN THREE RING BINDERS WITH JOB NAME, SUBCONTRACTOR, AND VOLUME ON THE BINDING. PREPARE TABS FOR EACH SPECIFICATION SECTION REQUIRING SUBMITTALS. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.
5. REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVE: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

ELECTRONIC SYSTEMS: THE TERM "ELECTRONIC SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

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MARK	DATE	DESCRIPTION
	8-8-05	CONST. DOCUMENTS

OWNER PROJECT NO:	
ARCH. PROJECT NO:	05-26
CAD DWG FILE:	
DRAWN BY:	PSS
CHECKED BY:	CBF
DESIGNED BY:	DLA

SHEET TITLE
SYMBOL LEGEND/
SHEET INDEX

EE-001
SHEET 11 OF 17 SHEETS

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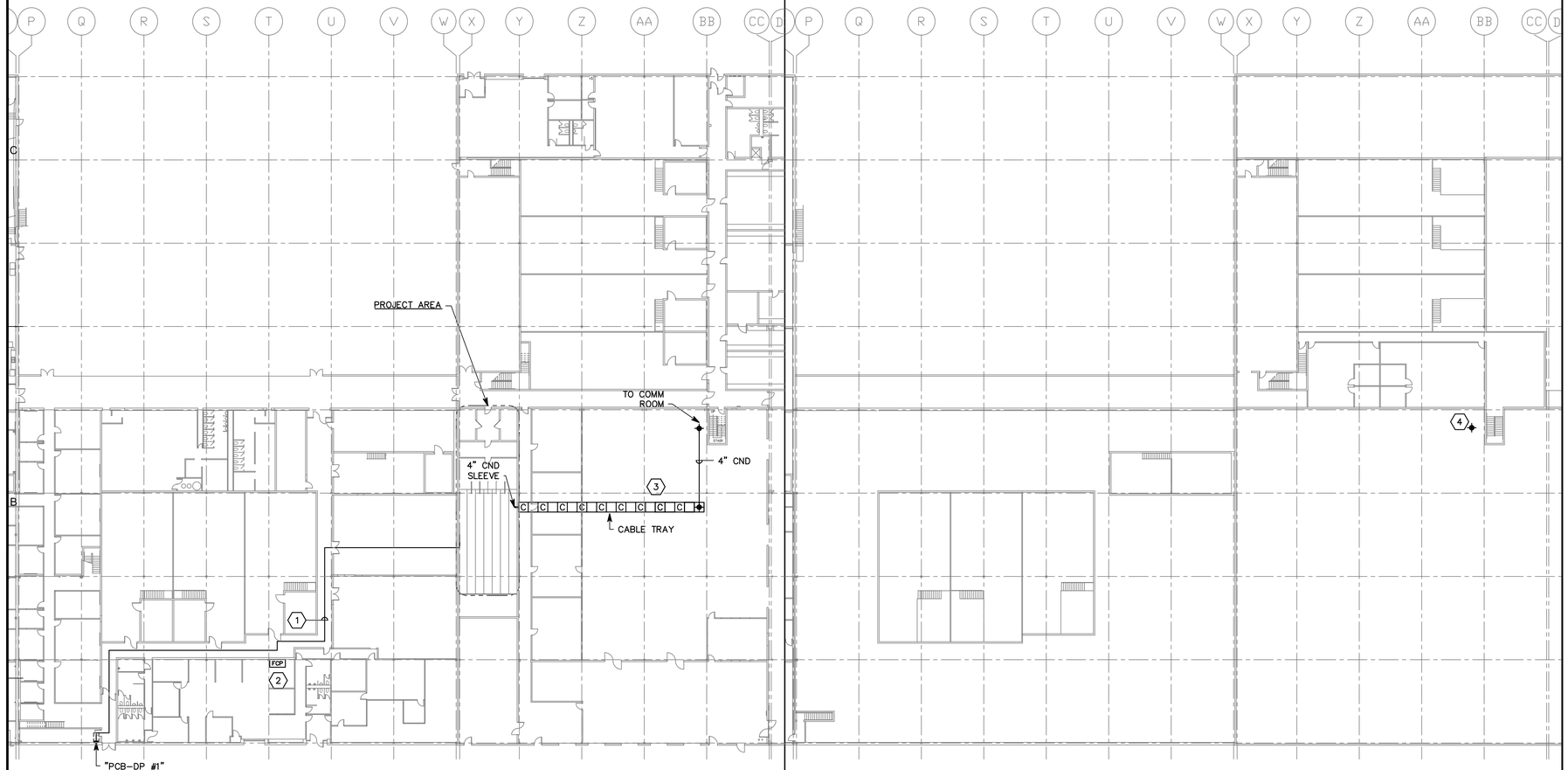

A1 LOWER LEVEL REFERENCE PLAN
SCALE: 1"=30'-0"

A3 UPPER LEVEL REFERENCE PLAN
SCALE: 1"=30'-0"

SHEET KEYNOTES

1. SUGGESTED ROUTE FOR POWER FEEDER.
2. EXISTING FIRE ALARM CONTROL PANEL (FACP). EXISTING PANEL IS SILENT KNIGHT MODEL 5820XL, 5895XL.
3. SEE CABLE TRAY ELEVATION DETAIL (SHEET EE-502, DETAIL A2).
4. APPROXIMATE LOCATION OF EXISTING COMMUNICATIONS ROOM ON THE SECOND FLOOR FIELD VERIFY ACTUAL LOCATION.

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REFERENCE PLANS

EE-101
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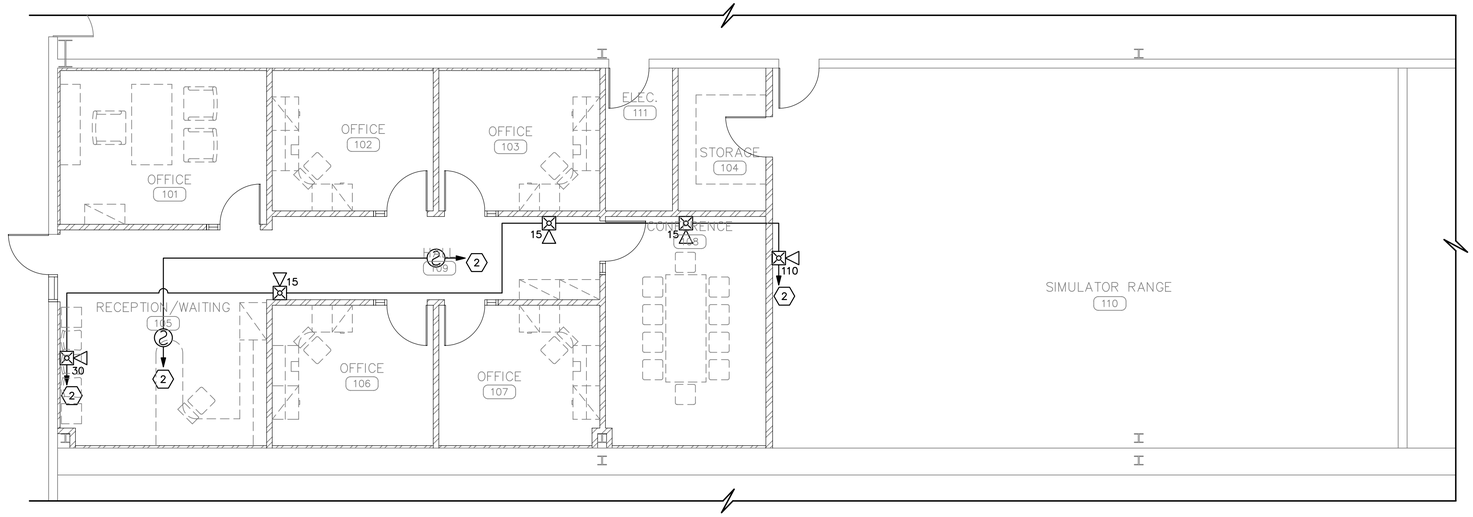
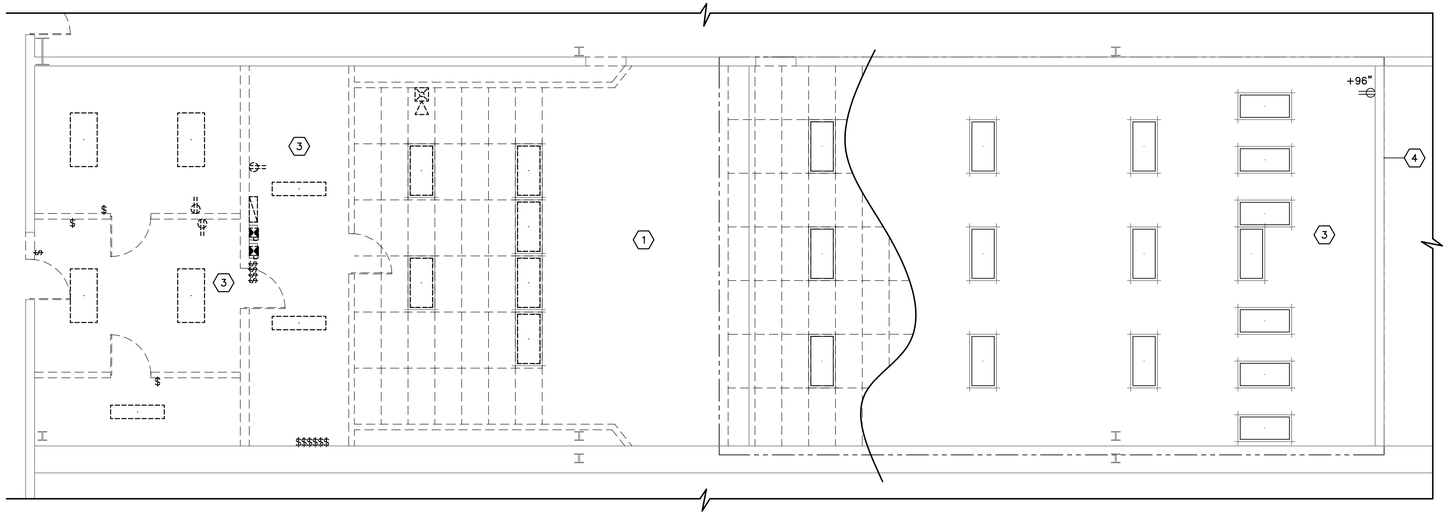


PLAN NORTH
ACTUAL NORTH

C1 FIRE ALARM PLAN

SCALE: 3/16"=1'-0"



PLAN NORTH
ACTUAL NORTH

A1 DEMOLITION PLAN

SCALE: 3/16"=1'-0"

GENERAL SHEET NOTES

1. COORDINATE REQUIREMENTS FOR EXTENSION OF FIRE ALARM LOOPS WITH DAN HOWARD WITH UTAH NATIONAL GUARD (244-4294) AND WITH SCOTT SCHRIBER WITH 'AAA' (544-7345).

SHEET KEYNOTES

1. REMOVE ALL ELECTRICAL EQUIPMENT IN THIS AREA UNLESS OTHERWISE NOTED.
2. CONNECT TO EXISTING FIRE ALARM SYSTEM LOOP. ADD BATTERIES AS REQUIRED TO SUPPORT THE NEW DEVICES. MATCH NEW DEVICES TO EXISTING SYSTEM.
3. REMOVE ALL ELECTRICAL EQUIPMENT ASSOCIATED WITH MECHANICAL ROOF-MOUNTED EQUIPMENT.
4. EXISTING LIGHTS AND DEVICES IN THIS AREA TO REMAIN. SWITCHING TO LIGHTS TO BE REMOVED AND REPLACED AS SHOWN ON SHEET EE-103. LIGHTS AND OUTLET SHALL REMAIN CONNECTED TO CIRCUITS CURRENTLY SERVING THEM.

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ARCH. PROJECT NO: 05-26
CAD DWG FILE:
DRAWN BY: PSS
CHECKED BY: CBF
DESIGNED BY: DLA
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SHEET TITLE

DEMOLITION &
FIRE ALARM PLANS

EE-102
SHEET 13 OF 17 SHEETS

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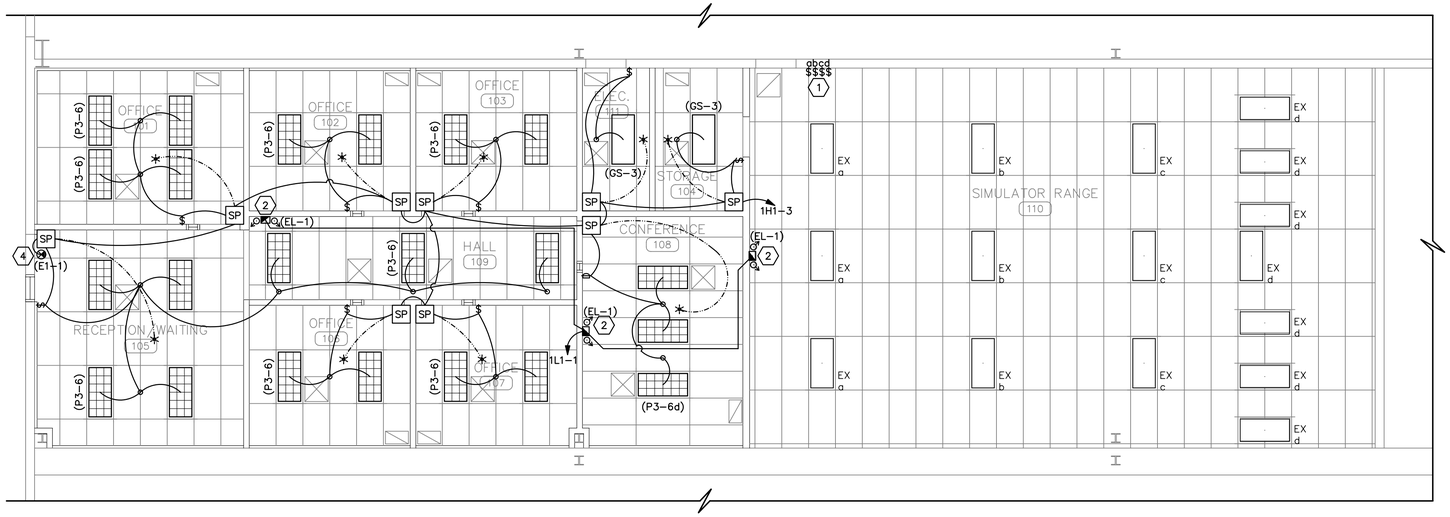
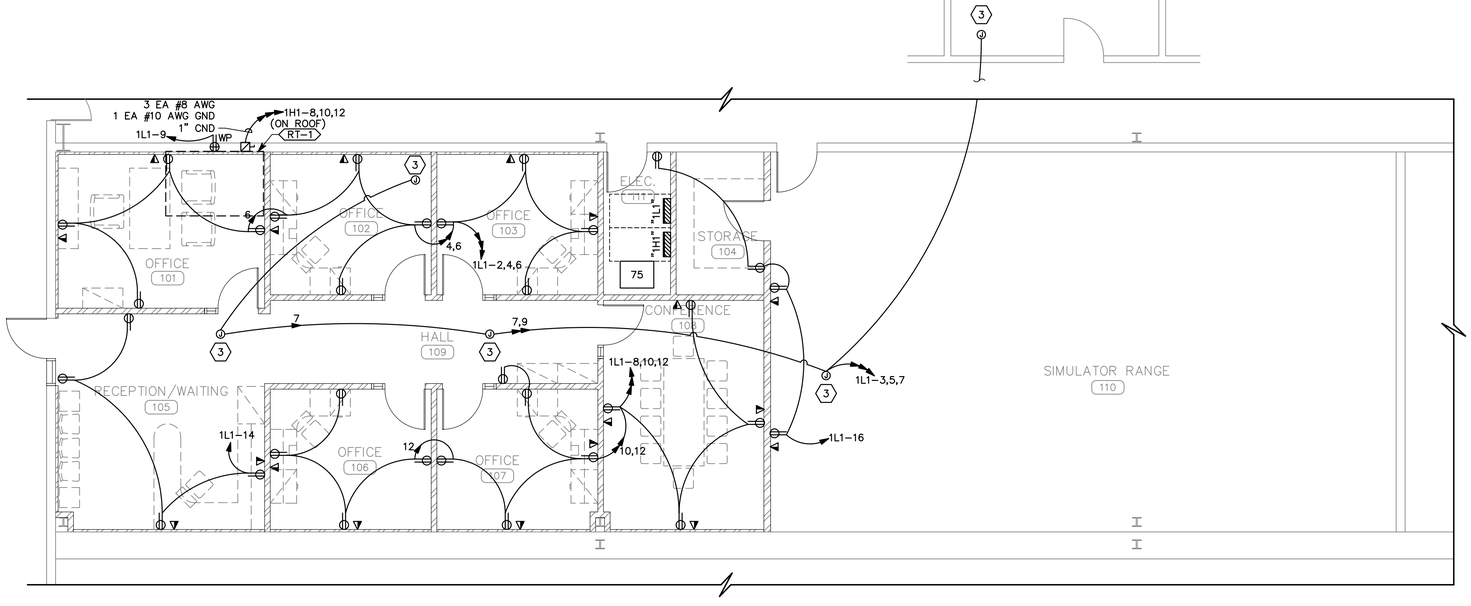


PLAN NORTH / ACTUAL NORTH

C1 LIGHTING PLAN

SCALE: 3/16"=1'-0"



PLAN NORTH / ACTUAL NORTH

A1 POWER PLAN

SCALE: 3/16"=1'-0"

SHEET KEYNOTES

1. PROVIDE NEW SWITCHES TO CONTROL EXISTING LIGHTING IN "SIMULATOR RANGE 110". SWITCH LIGHTS IN BANKS AS INDICATED.
2. PROVIDE CONVENIENCE OUTLET FOR EL-1 FIXTURE. LOCATE 6-INCHES BELOW CEILING.
3. PROVIDE JUNCTION BOX ABOVE ACCESSIBLE CEILING FOR ZONE DAMPERS. DAMPERS FURNISHED BY DIV 15. FINAL ELECTRICAL CONNECTION BY DIV 16. COORDINATE EXACT LOCATION WITH MECHANICAL.
4. CONNECT EXIT SIGN TO UNSWITCHED LEG OF CIRCUIT.

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MARK	DATE	DESCRIPTION
	8-8-05	CONST. DOCUMENTS

OWNER PROJECT NO:
ARCH. PROJECT NO: 05-26
CAD DWG FILE:
DRAWN BY: PSS
CHECKED BY: CBF
DESIGNED BY: DLA
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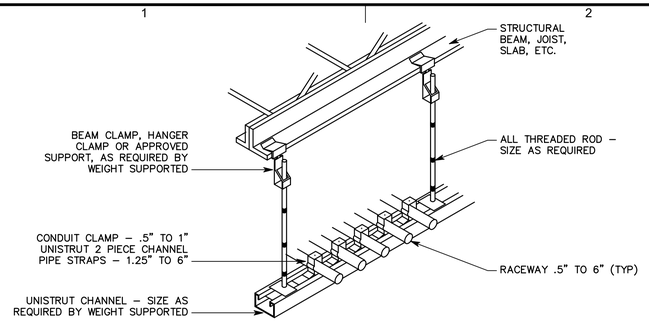
SHEET TITLE

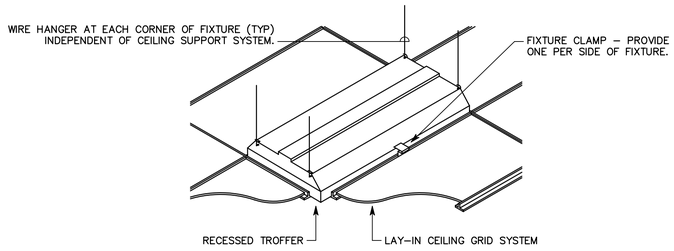
POWER &
LIGHTING PLANS

EE-103
SHEET 14 OF 17 SHEETS

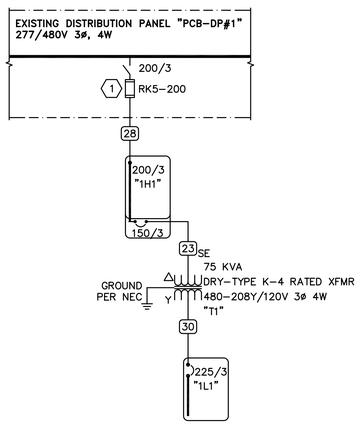
File name: P:\2005\20050462\1Drawings\Sheet\62-EE-103.dwg Last Plotted: 08/25/2005 @ 11:47 By: pss



D1 TYPICAL CONDUIT RACK DETAIL
NTS



C1 RECESSED FIXTURE MOUNTING DETAIL
NTS



C3 POWER ONE-LINE DIAGRAM
NTS

SHEET KEYNOTES

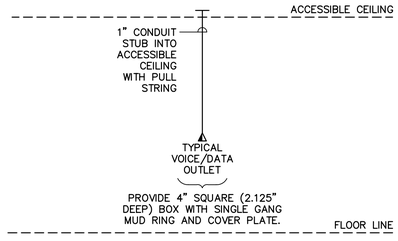
1. EXISTING 200AMP FUSED SWITCH. PROVIDE NEW FUSES.
2. FIELD VERIFY EXISTING EQUIPMENT IN COMM ROOM AND COORDINATE WITH UTAH NATIONAL GUARD NEW EQUIPMENT REQUIRED FOR EXPANSION OF SERVICE WITH MIKE HANSEN (523-4118). PRIOR TO BID.

TELECOMMUNICATIONS CABLING – GENERAL NOTES

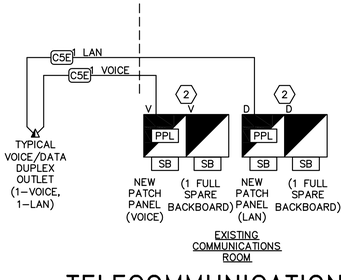
1. ALL WORK SHALL BE IN COMPLIANCE WITH UTNG STANDARD UT-GG-C (2003).
2. ALL WORK SHALL BE COORDINATED WITH MIKE HANSEN (UTNG).

TELEPHONE/DATA EQUIPMENT/CABLE LIST

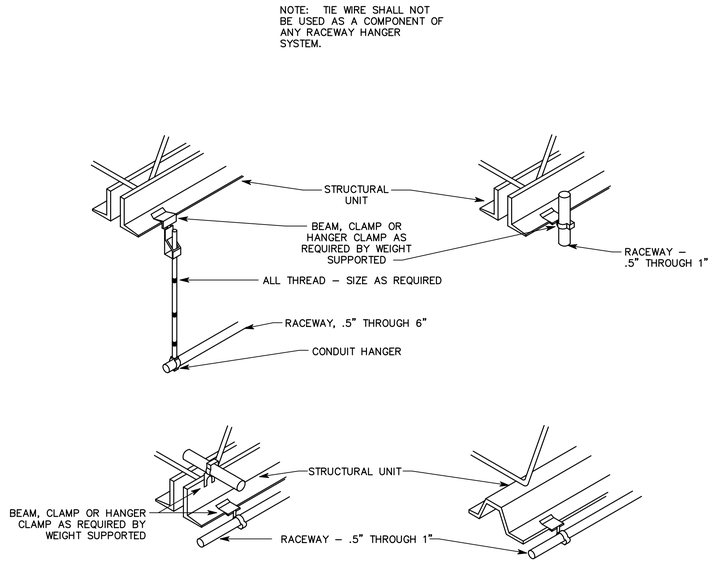
SYMBOL	ITEM DESCRIPTION	MANUFACTURERS
X C5E VOICE	VOICE CABLING, CATEGORY 5E	COMMSCOPE CAT 5E BLUE ('X' INDICATES QUANTITY)
X C5E DATA	DATA CABLING, CATEGORY 5E	COMMSCOPE CAT 5E YELLOW ('X' INDICATES QUANTITY)
PPL	PATCH PANEL	SIEMON HD5-89D-12
V	BLUE METAL BACKBOARD (VOICE)	M183-B2 (VAR)
D	YELLOW METAL BACKBOARD (DATA)	M183-B2 (VAR)
SB	FULL SPOOL BOARDS	M187-B1 (VAR)
▽	WORK STATION OUTLET (1-LAN, 1-VOICE)	SIEMON CT-C5-C5-02 (ANGLED JACK) SIEMON CT2-FP-02 (FACEPLATE)



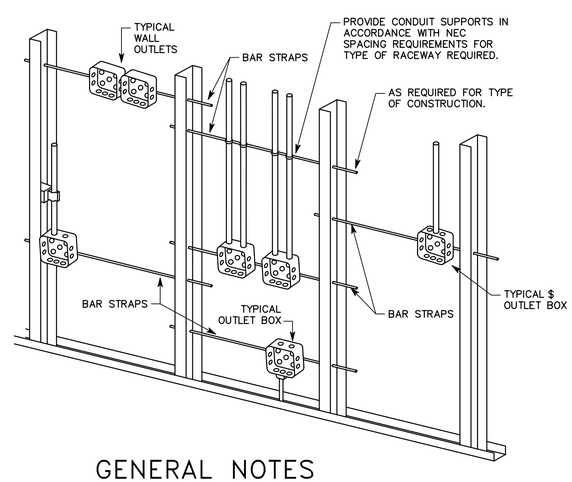
B1 VOICE/DATA RACEWAY RISER DIAGRAM
NTS



A1 TELECOMMUNICATIONS CABLING RISER DIAGRAM
NTS



A2 TYPICAL RACEWAY SUPPORT METHODS DETAIL
NTS



GENERAL NOTES

1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH IBC 711.3.2 EXCEPTION 1, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE IN A RATED FIRE SEPARATION WALL MUST BE SEPARATED BY A MINIMUM OF 24" HORIZONTAL DISTANCE.
5. IN NON-RATED WALLS, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY 16" FOR SOUND ATTENUATION.

A4 TYPICAL ROUGH-IN REQUIREMENTS DETAIL
NTS

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EE-501
SHEET 15 OF 17 SHEETS

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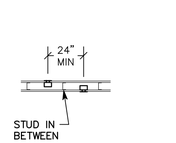
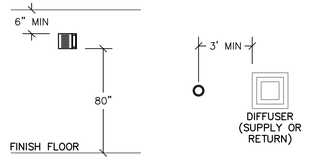
GENERAL USE: ADA

D5 SWITCH MOUNTING DETAILS
NTS



BOXES ON OPPOSITE SIDES OF WALL

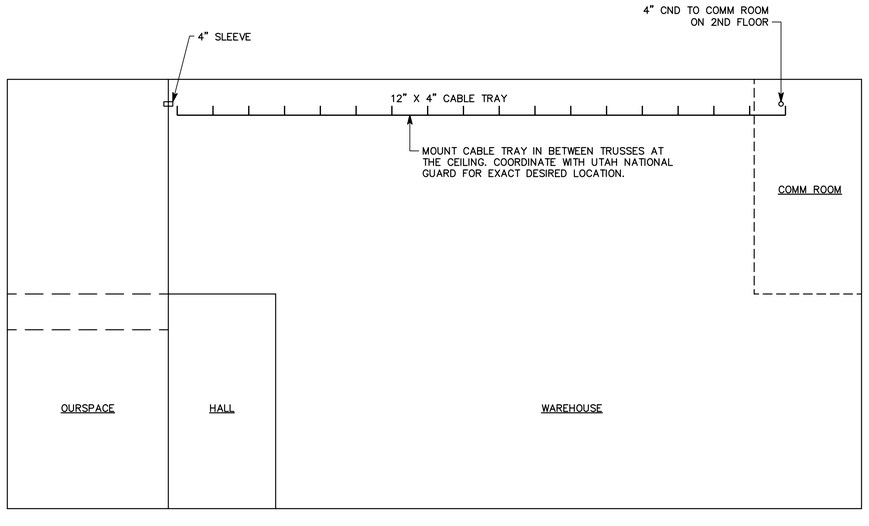
C4 BOX MOUNTING DETAILS
NTS



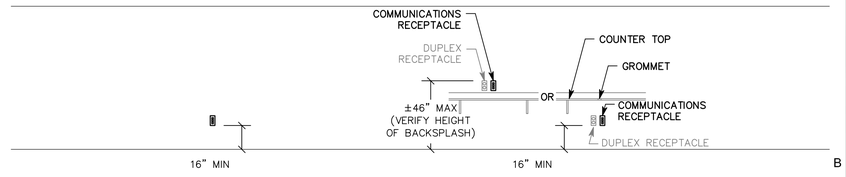
HORN/STROBE

SMOKE DETECTOR ADJACENT TO SUPPLY AIR

C5 FIRE ALARM MOUNTING DETAILS
NTS



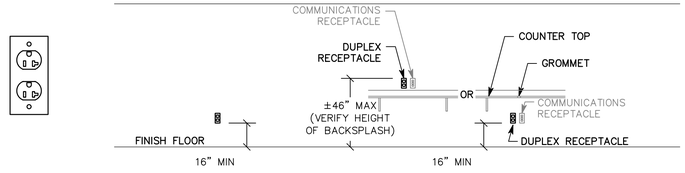
A2 CABLE TRAY ROUTE – ELEVATION
NTS



GENERAL USE: NO SPECIAL REQUIREMENTS

RECEPTACLES ABOVE OR BELOW COUNTER

B4 COMMUNICATION MOUNTING DETAILS
NTS



DUPLEX RECEPTACLES

GENERAL USE: NO SPECIAL REQUIREMENTS

RECEPTACLES ABOVE OR BELOW COUNTER

REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.

A4 RECEPTACLE MOUNTING DETAILS
NTS

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DETAILS

EE-502
SHEET 16 OF 17 SHEETS

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PANEL "1H1"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE & TYPE:	LOCATION:	CABINET:	NOTES:
277/480 V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	200 AMPERE MAIN LUG	SIMULATOR RANGE	SURFACE	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, SUBFEED LUGS

CKT	OCP		LOAD (kVA)			DESCRIPTION	LCL	PHASE LOAD			LCL	DESCRIPTION	LOAD (kVA)			OCP		CKT
NO	AMP	POLE	LTG	CO	PWR		kVA	A	B	C	kVA		LTG	CO	PWR	AMP	POLE	NO
1	20	1				SPARE	0.0	3.3			3.3	TRANSFORMER – T1	0.1	2.2	1.0	150	3	2
3	20	1	2.4			OFFICE LIGHTING	3.0		5.5		3.2	–	0.0	2.2	1.0	–	–	4
5	20	1				SPARE	0.0			2.4	2.4	–	0.0	1.4	1.0	–	–	6
7	20	1				SPARE	0.0	5.1			5.1	ROOFTOP UNIT – RT-1			5.1	40	3	8
9	20	1				SPARE	0.0		5.1		5.1	–			5.1	–	–	10
11	20	1				SPARE	0.0			5.1	5.1	–			5.1	–	–	12
13	20	1				SPARE	0.0	0.0			0.0	SPARE				20	1	14
15	20	1				SPARE	0.0		0.0		0.0	SPARE				20	1	16
17	20	1				SPARE	0.0			0.0	0.0	SPARE				20	1	18
19	20	1				SPARE	0.0	0.0			0.0	SPARE				20	1	20
21	20	1				SPARE	0.0		0.0		0.0	SPARE				20	1	22
23	20	1				SPARE	0.0			0.0	0.0	SPARE				20	1	24
25	20	1				SPARE	0.0	0.0			0.0	SPARE				20	1	26
27	20	1				SPARE	0.0		0.0		0.0	SPARE				20	1	28
29	20	1				SPARE	0.0			0.0	0.0	SPARE				20	1	30
31	20	1				SPARE	0.0	0.0			0.0	SPARE				20	1	32
33	20	1				SPARE	0.0		0.0		0.0	SPARE				20	1	34
35	20	1				SPARE	0.0			0.0	0.0	SPARE				20	1	36
37	20	1				SPARE	0.0	0.0			0.0	SPARE				20	1	38
39	20	1				SPARE	0.0		0.0		0.0	SPARE				20	1	40
41	20	1				SPARE	0.0			0.0	0.0	SPARE				20	1	42
TOTALS:						CONNECTED kVA PER PHASE	8	11	8			CONNECTED TOTAL kVA	27					
						CONNECTED AMPS PER PHASE	30	38	27			CONNECTED AVERAGE AMPS PER PHASE	32					

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING 2kVA @125% =	3 kVA	ALL OTHER LOADS @100% =	18 kVA	DIVERSIFIED TOTAL kVA =	27
RECEPTACLES 6kVA @100% =	6 kVA	25% OF LARGEST MOTOR =	0 kVA	AVERAGE AMPS PER PHASE =	33
REMAINDER 0kVA @ 50% =	0 kVA				

PANEL "1L1"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE & TYPE:	LOCATION:	CABINET:	NOTES:
120/208 V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	225 AMPERE MAIN BKR	SIMULATOR RANGE	SURFACE	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, SUBFEED LUGS

CKT	OCP		LOAD (kVA)			DESCRIPTION	LCL	PHASE LOAD			LCL	DESCRIPTION	LOAD (kVA)			OCP		CKT
NO	AMP	POLE	LTG	CO	PWR		kVA	A	B	C	kVA		LTG	CO	PWR	AMP	POLE	NO
1	20	1	0.2			EMERG LIGHTS	0.3	0.9			0.7	OFFICE – 103		0.7		20	1	2
3	20	1			1.0	ZONE DAMPERS	1.0		1.7		0.7	OFFICE – 102		0.7		20	1	4
5	20	1			1.0	ZONE DAMPERS	1.0			1.7	0.7	OFFICE – 101		0.7		20	1	6
7	20	1			1.0	ZONE DAMPERS	1.0	1.7			0.7	CONFERENCE – 108		0.7		20	1	8
9	20	1		0.2		ROOF OUTLET	0.2		0.9		0.7	OFFICE – 107		0.7		20	1	10
11	20	1				SPARE	0.0			0.7	0.7	OFFICE – 106		0.7		20	1	12
13	20	1				SPARE	0.0	0.7			0.7	RECEPTION – 105		0.7		20	1	14
15	20	1				SPARE	0.0		0.5		0.5	SIMULATOR – 110		0.5		20	1	16
17	20	1				SPARE	0.0			0.0	0.0	SPARE				20	1	18
19	20	1				SPARE	0.0	0.0			0.0	SPARE				20	1	20
21	20	1				SPARE	0.0		0.0		0.0	SPARE				20	1	22
23	20	1				SPARE	0.0			0.0	0.0	SPARE				20	1	24
25	20	1				SPARE	0.0	0.0			0.0	SPARE				20	1	26
27	20	1				SPARE	0.0		0.0		0.0	SPARE				20	1	28
29	20	1				SPARE	0.0			0.0	0.0	SPARE				20	1	30
31	20	1				SPARE	0.0	0.0			0.0	SPARE				20	1	32
33	20	1				SPARE	0.0		0.0		0.0	SPARE				20	1	34
35	20	1				SPARE	0.0			0.0	0.0	SPARE				20	1	36
37	20	1				SPARE	0.0	0.0			0.0	SPARE				20	1	38
39	20	1				SPARE	0.0		0.0		0.0	SPARE				20	1	40
41	20	1				SPARE	0.0			0.0	0.0	SPARE				20	1	42
TOTALS:						CONNECTED kVA PER PHASE	3	3	2			CONNECTED TOTAL kVA	9					
						CONNECTED AMPS PER PHASE	28	26	20			CONNECTED AVERAGE AMPS PER PHASE	25					

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING 0kVA @125% =	0 kVA	ALL OTHER LOADS @100% =	3 kVA	DIVERSIFIED TOTAL kVA =	9
RECEPTACLES 6kVA @100% =	6 kVA	25% OF LARGEST MOTOR =	0 kVA	AVERAGE AMPS PER PHASE =	25
REMAINDER 0kVA @ 50% =	0 kVA				

LIGHTING FIXTURE SCHEDULE

NOTE TO BIDDERS: COMPLY WITH SECTIONS 16511, 16521, AND 16570 OF THE SPECIFICATIONS. REFER TO SPECIFICATIONS FOR IMPORTANT TECHNICAL REQUIREMENTS FOR LIGHTING FIXTURES, BALLASTS, AND LAMPS. THE CATALOG NUMBERS LISTED BELOW HAVE BEEN CAREFULLY PREPARED TO ASSIST BIDDERS IN SELECTING PRODUCTS TO ACHIEVE THE DESIGN CONCEPT, HOWEVER, PRIOR TO BIDDING, EACH MANUFACTURER SHALL COMPARE THE CATALOG NUMBERS SHOWN WITH THE DESCRIPTION AND REQUIREMENTS ON THE DRAWINGS, AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. SPECIFICALLY INCLUDED IN THIS EVALUATION SHALL BE THE VERIFYING OF PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS. NO ALLOWANCE OR REDRESS WILL BE ALLOWED FOR DISCREPANCIES THAT WERE NOT REPORTED TO THE ARCHITECT/ENGINEER IN TIME FOR CORRECTION OR CLARIFICATION BEFORE THE BID. THE REPORTING OF ANY AMBIGUITY IS THE RESPONSIBILITY OF THE BIDDER. PROVIDE UNIT PRICES AND FIXTURE BRAND SELECTED FOR ADD/DELETE CHANGES FOR EACH FIXTURE TYPES SHOWN WITHIN 48 BUSINESS HOURS OF THE BID DATE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY DISQUALIFY THE PRODUCTS AND EMPOWER THE ENGINEER TO DETERMINE FAIR VALUE FOR FIXTURE AND INSTALLATION CHANGES, WITHOUT FURTHER INPUT FROM THE CONTRACTOR OR INSTALLER. SUBMITTAL PACKAGE SHALL INCLUDE LAMP MANUFACTURER AND CATALOG NUMBER ON EACH FIXTURE SHEET. ON ALL PENDANT MOUNTED FIXTURES, PROVIDE A SECOND SET OF PENDANTS, OF A DIFFERENT LENGTH, AS DIRECTED BY THE ARCHITECT/ENGINEER, PROVIDED AND INSTALLED AT NO ADDITIONAL CHARGE. ALL FIXTURES SHALL BE APPROVED BY UL OR ANOTHER ACCEPTABLE TESTING LAB FOR THE PURPOSE INTENDED AND WITH THE LAMP AND BALLAST PROPOSED. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED, CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID. ALLOWANCE PRICE MAY OR MAY NOT INCLUDE LAMP(S) OR FREIGHT AS NOTED, AND DO NOT INCLUDE ANY TAXES. UNIVERSAL VOLTAGE (120/277) BALLASTS REQUIRED UNLESS NOTED OTHERWISE.

SYMBOL	MARK	FIXTURE CHARACTERISTICS BODY / AIR / MOUNTING / DOOR LENS/LOUVER/REFLECTOR/OTHER	LAMP	WATTS	VOLTS	MANUFACTURER	CATALOG NUMBER	NOTES
	E1	EXIT SIGN: THERMOPLASTIC HOUSING; UNIVERSAL MOUNTING; UNIVERSAL ARROWS PER PLANS; EMERGENCY BATTERY PACK WITH 10 YEAR PRO-RATA WARRANTY; LED, DIFFUSE LENS PANEL; GREEN LETTERS ON WHITE BACKGROUND. MUST MEET NFPA ILLUMINATION STANDARDS.						
(E1-1)	E1-1	SINGLE FACE:	LED	1W	120/277V	DUAL-LITE	LXSGWE	
						EELP	XE 1 GW EM	
						LITHONIA	LOM S W 1 G 120/277 ELN	
						SURE-LITES	LPX70DGW	
						DAY-BRITE	CXL-1-GW-EM	
						CHLORIDE	SLN1GW	
						LIGHTOLIER	LTN1GW	
	EL	LOW PROFILE SELF-CONTAINED EMERGENCY LIGHT; FULLY ADJUSTABLE HEADS; FIXED TEST SWITCH, CHARGE RATE INDICATOR; 90 MINUTE OPERATION; LOW VOLTAGE DISCONNECT; 5 YEAR PRO-RATA WARRANTY.						
	EL-1	TWO-HEADED UNIT, SURFACE MOUNTED. CORDSET ATTACHED	LAMPS INC?D	15W	120/277V	DUAL-LITE	EZ-2-A2	
						HUBBELL	PE615-2R6H WITH CORDSET	
						LITHONIA	ELM-CSR	
						SURE-LITES	CC-3-CSK-120	
						MCPHILBEN	CT6 WITH CORDSET	
						LIGHTOLIER	E112LT6W-LCK1	
						EELP	EM-1 WITH CORDSET	
	GS	TROFFERS: RECESSED FOR LAY-IN GRID; STATIC; HINGED AND LATCHED STEEL DOOR; .125 ACRYLIC PRISMATIC LENS, MINIMUN 1/8"; EARTHQUAKE CLIPS; MAX 5" DEEP; SPECIFICATION GRADE; PROGRAM START ELECTRONIC BALLASTS, T8 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.						
(GS-3)	GS-3	2X4, 2 LAMP.	2-F32T8 RE835	65W	277/120V	LITHONIA	2 SP8G 232 A12125 MVOLT TUBRHP	
						METALUX	2GP-232A125-UNV-EB81-PROGRAM START	
						DAYBRITE	2DPG232-FS21-UNV-1/2EB-SPEC	
						LSI	LA125 232 SD SSO10PS UE	
						LIGHTOLIER	XT2GVI232-UNV-SOP	
						COLUMBIA	4PS24-232G-FSA12.125-EB8-PROG	
	P3	PARABOLIC LOUVER FIXTURES WITH 3" LOUVERS IN PLASTIC PROTECTORS AND FULL DEPTH REFLECTOR; SIZE AS NOTED; PROGRAM START ELECTRONIC BALLASTS PER SPECS; T8 LAMPS; ONE BALLAST PER FIXTURE UNLESS NOTED FOR SWITCHING; STATIC OR AIR RETURN AND HEAT REMOVAL; EARTHQUAKE CLIPS INSTALLED ON ON GRID FIXTURES; HINGED AND LATCHED DOOR; LOW IRIDESCENT LOUVER FINISH, VERTICAL GRAIN DIE STAMPED LOUVERS; TWO FORMED BALLAST COVERS; MAX 1300 CD/M2 ABOVE 45 DEGREES.						
(P3-6)	P3-6	2X4, 18 CELL LAY-IN; SEMI-SPECULAR SILVER, 3-LAMP. STATIC.	3-F32T8 RE835	95W	277/120V	LITHONIA	2PM3NGB-332-18LD-MVOLT-1/3TUBRHP-2R	
						DAYBRITE	2P3GS332-36SL-UNV-1/3-EB-SPEC	
						METALUX	2EP3GX-332S36I-UNV-PROGRAM START-2BC	
						COLUMBIA	P424-332G-LD36-S-3EB8120/277 PROG	
						LSI	N2PG18 332 FD SSO10PS 2BC UE	
						LIGHTOLIER	DPS2G18LP332-U-03P	
(P3-6d)	P3-6d	2X4, 18 CELL LAY-IN; SEMI-SPECULAR SILVER, 3-LAMP. STATIC. 1% DIMMING BALLAST	3-F32T8 RE835	95W	277/120V	LITHONIA	2PM3NGB-332-18LD-MVOLT-1/3TUBRHP-2R	
						DAYBRITE	2P3GS332-36SL-UNV-1/3-EB-SPEC	
						METALUX	2EP3GX-332S36I-UNV-PROGRAM START-2BC	
						COLUMBIA	P424-332G-LD36-S-3EB8120/277 PROG	
						LSI	N2PG18 332 FD SSO10PS 2BC UE	
						LIGHTOLIER	DPS2G18LP332-U-03P	

EQUIPMENT SCHEDULE

MARK	QTY	ITEM DESCRIPTION	LOAD DATA							WIRE AND CONDUIT SIZE	OVERCURRENT PROTECTION			DISCONNECT			STARTER DATA												NOTES	MARK
			HP	kW	MCA	FLA	VOLT	PH	Hz		FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	SIZE	SPEED	CTRL VOLT	SELECTOR SWITCH	PUSH BUTTON	PILOT LAMP	NORMALLY OPEN CONTACTS	NORMALLY CLOSED CONTACTS	PHASE FAILURE RELAY	SCHEMATIC REFERENCE	REMOTE CTRL		
RT-1	1	ROOFTOP UNIT			18.4		480	3	60	1" CND, 3EA #8AWG, 1EA #10AWG GND	E	40/3 C. B.	PANEL 1H1	E	30/3 RK5-30	ADJ TO UNIT	Q															RT-1

EQUIPMENT SCHEDULE KEY

E	DIVISION 16
Q	FURNISHED WITH THE EQUIPMENT

SCOTT P. EVANS
ARCHITECT
& ASSOCIATES P.C.

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SPECTRUM ENGINEERS

UTAH NATIONAL GUARD
DRAPER HEADQUATERS
OFFICE REMODEL
12953 MINUTEMAN
DRAPER, UTAH 84020

MARK	DATE	DESCRIPTION
	8-8-05	CONST. DOCUMENTS

OWNER PROJECT NO:	
ARCH. PROJECT NO:	05-26
CAD DWG FILE:	
DRAWN BY:	PSS
CHECKED BY:	CBF
DESIGNED BY:	DLA

SHEET TITLE
SCHEDULES

EE-601
SHEET 17 OF 17 SHEETS

File name: P:\2005\20050462\1Drawings\Sheet\62-EE-601.dwg Last Plotted: 08/25/2005 @ 11:46 By: pss